#### **DECEMBER** 2 5 9 1

Vol. XXXVI No. 6





Cover Design by H. C. Murphy, Jr.

Going to windward. A view taken from the cockpit of the 52 foot auxiliary schooner Troubadour, off the coast of Maine, in October. This able craft is owned by M. H. Haskell of Tuscon, Arizona. She is powered with a four cylinder Scripps motor

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# \$10,000,000 to Loan

## To Our Property Owners For Building Purposes



E are so sure and confident of Florida's future and of the future of Davis Islands that we make the unusual offer to our property owners of lending them \$10,000,000—immediately available—for building purposes. This is in addition to the \$7,000,000 contract which we awarded during the past week to the Hegeman-Harris Company, Inc., of New York and Chicago, for further building and development work on Davis Islands.

Although our property is completely sold out and in the hands of the people, we make this offer seeking to help build a greater Tampa; to assure greater profits and early returns for our property owners; to evidence our continued faith in Davis Islands, and to invest our money in the same community in which our profits have been earned.

We cordially invite applications for loans from all of our property owners who desire to construct homes, apartment houses, hotels or business buildings on Davis Islands. Our loan policy will be liberal and this new department is prepared to furnish every facility and assistance to prospective builders.

We also announce the acquisition of another island project to be developed by this company in St. Augustine which will be presented to the public shortly. This new \$50,000,000 development is to consist of five islands comprising 1,500 acres and will be known as



#### D. P. DAVIS PROPERTIES

Tampa, Florida

Branches Throughout Florida

# ACROSS Motor MERICA Boat

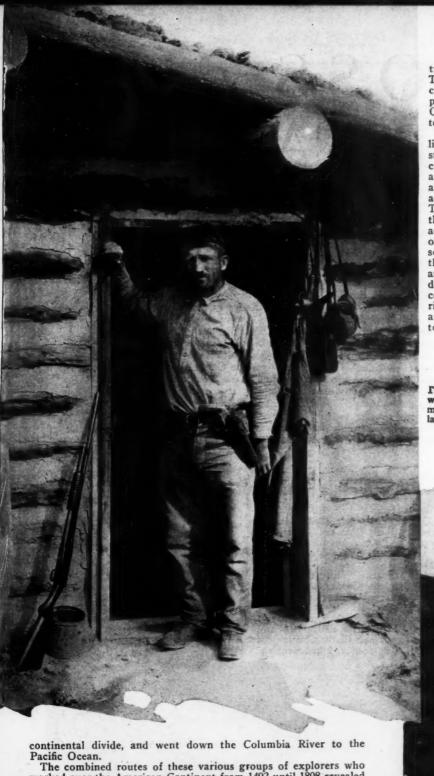
By John Edwin Hoag

# Up the Columbia River

Part I

THE story of the first crossing of the American Continent by boat. Transcontinental, an 18-foot craft driven by two, four h orse power Evinrude outboard motors, was designed by the author, and built especially for the trip. Commanded by Mr. Hoag, who conceived and planned the journey, the boat left the Pacific Ocean at Astoria, Oregon, and set out up the Columbia River on May 20, 1925. It arrived in New York October 4, after having made the trip from ocean to ocean entirely by water, except for one major portage over the continental divide, between the Columbia and Missouri Rivers. The boat traveled 5,680 miles, and in that distance touched or traversed sixteen states of the American Union, and two provinces of Canada. It accomplished the journey that for four hundred years defied the efforts of Columbus, Cabot, Hudson, Champlain, Cartier, and other explorers who sought to find a water route across America. The cruise is without doubt the longest ever made in fresh water by any boat, and extraordinary in the fact that a record-breaking distance was covered in close contact with the land.—Editor.





tween 1807 and 1925, until the Transcontinental's attempt cross the continent was accom-plished by its arrival in New York City from the Pacific Ocean on Oc-

tober 4, 1925.

MoToR BoatinG last month published under the writer's name the story of how the transcontinental cruise was conceived and planned, and the boat built especially for the attempt to blaze the first water trail across America from ocean to ocean. The story now sifts down to how the crossing of the continent was actually accomplished, the narrative of the journey itself, the experiences, sorrows, adventures, and joys, of the writer as skipper of the craft, and of his two companions, and a dog during the 137 days that Trans-continental" nosed her way through rivers, likes, canals, sounds, bays, and bayous; from Astoria, Oregon to New York City.

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The west is still wild and woolly. A hermit cowman of the Montana bad lands before his cabin

worked over the American Continent from 1492 until 1808 revealed the fact that long before the first covered wagon got across from ocean to ocean—white men had piece by piece actually crossed America traveling entirely by water except for certain minor land portages. While no one person ever made the ocean to ocean trip as a continuous journey until the year 1925, enough was known of the route by 1807 to induce President Thomas Jefferson to recommend the establishment of a transcontinental commercial waterway. In those days when waterways were the chief avenues of commerce, Jefferson guided by the light shed upon our national geography by the discoveries of Lewis and Clark wisualized the possibilities of an ocean to ocean waterway with a post road establishing communication between the headwaters of the Columbia and Missouri Rivers where no navigable waterways exist. Jeffer-son's dream was not realized, and was apparently forgotten be-

Transcontinental, built in Los Angeles by Emil Aarup, veteran boat-builder, had been launched at Los Angeles Harbor, and thoroughly tried out and tested in the Pacific Ocean several weeks before she was shipped to Astoria to begin her attack upon the American Continent up the Columbia River. In the trial runs she had performed even beyond the expectations of her designer and owner, and even Mr. Aarup, her builder. On May 13, she was driven from the California Yacht Club at Wilmington, California, to the Pacific Steamship Company's dock at Los Angeles Harbor. There, with all the equipment to be used on the transcontinental cruise, she was delivered in the water alongside the steamer Admiral Farragut, hoisted aboard, and started on the way to her transcontinental starting point-Astoria, Oregon, The writer, Frank S. Wilton, motion picture cameraman; and Val Woodbury, Southern California business man, who comprised skipper and crew of the craft attempting the first crossing of the American Continent by water, were booked as passengers on the same ship. A fourth member of Transcontinental's personnel, was Spy, a wirehaired brindle Scotch Terrier, the pet and property of Mr. Wilton riding on a dog ticket in the steamer's baggage room.

Upon the arrival of the Admiral Farragut at Astoria Transcontinental was hoisted off onto the dock, while the three adventurers who had announced their intention of attempting to cross America by water were promptly taken in tow by Claude I. Barr, Secretary of the Astoria Chamber of Commerce, and a delegation of

citizens who were attempting to give us a befitting sendoff. All of them freely predicted that we would go through to a history-making success, or would sink into oblivion that would probably inscribe our tombstones with some such epitaph as—"Fools who attempted to cross America by motor boat in the year A. D. 1925." While we received every hospitality and encouragement from the city of Astoria, the town was not without the anticipated coterie of crepe hangers. Across the bow of our boat was the name TRANSCONTINENTAL, with her port of registry as Astoria, Oregon. Below this was inscribed: "Headed for Heaven, Hell, or Hoboken." Predictions were freely made that we'd arrive in one or the other of the first two ports long before we could ever hope to tie up at Hoboken—or even before we got well under way up the mighty Columbia. Pools and bets were taken, and the odds were about nine to one that we could not hope to succeed. Experienced old Columbia River boatmen predicted we would never get out of the Columbia alive-and that if we survived the Columbia, disaster was almost certain to overtake us before we could hope to run the more than 5,000 miles of treacherous rivers and great lakes that stretched out before us between the top of the continental divide and New York City. However, the best, and most

thinking citizens those who have built Astoria to the beautiful modern little city that it is today from

The Columbia River looking down stream from The Dalles, Oregon. Taken from a height near the city





The skipper and crew of Transcontinental at the Lewis and Clark Salt Cairn at Astoria, Oregon. When Lewis and Clark were exploring the Pacific Northwest they ran out of salt and camped on this spot to boil Pacific ocean water to secure salt for the return trip to St. Louis

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The unsuccessful attempt to scale the Cascade R a pids. Transcontinental is seen here in tow of the powerful cannery tug which failed to get the boat up the stretch of water where the Columbia drops 27 feet perpendicularly in three miles



Wilton and Woodbury blowing their beds. Mosquitos were frequently encountered in unnumbered millions which necessitated the mosquito nets shown in the back ground of ale by Co

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the ashes of the disaster that left only tide-swept and blackened embers two years ago seemed to give us credit for being in earnest. The town was virtually turned for being in earnest. over to us while the preliminary preparations were made for getting under way. Everybody seemed ready to lend us a hand toward helping us in every possible way. Only the crepe hangers were annoying. They'd come around one after the other telling us horrible tales of tragedy on the Columbia—tales of the terrors of the rapids, the spring freshet upon which we were ascending, debris coming down the river which had ground to pieces bigger and stronger boats than ours, of boat-swallowing whirlpools, dangerous eddies-and what not. No doubt these persons meant well-intending only to warn us against dangers which they knew we faced, but they added nothing to our peace of mind.

On the morning of May 20, very early, and with most of Astoria down at the waterfront, Transcontinental

at least honor our dog to the extent of naming him after the tuber upon which they so largely subsisted. Also, just as Lewis and Clark were the moving spirits behind the original exploring party, the two outboard motors that supplied the power to our boat were the propelling medium of our expedition over the very route those dis-tinguished explorers so painfully and laboriously traveled. Accordingly the two motors were named-one LEWIS and the other CLARK, and the names painted in gold letters upon the side of each motor.

For those who have never seen the Columbia River it should be mentioned here that it is the greatest river on the North American Continent flowing into the In front of Astoria where it roars over the Columbia River bar into the ocean it is approximately 12

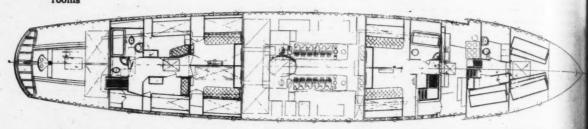


was befittingly christened by Miss Vada Morfitt, one of the belles of the town who smashed a bottle of ginger ale over the bow as the boat was lifted off the dock by a powerful crane, and set down in the waters of the Meanwhile the motion picture clicked, and a squad of newspaper cameramen laid down a barrage of photographic artillery. Almost one of the last incidents in Astoria was the presentation to Spy of a handsomely engraved collar with the compliments of The Astoria Business and Professional Women's Association. Likewise, the ladies insisted that the name Spy was too drab and prosaic for so distinguished a dog embarking upon such a hazardous journey. He was accordingly re-christened Spy-Wapato, the latter appelation being the name of a Pacific-Northwest water tuber upon which Lewis and Clark and the members of their party virtually subsisted while exploring the region. Inasmuch as we were to travel essentially the same route as Lewis and Clark traveled from Astoria to St. Louis, Missouri, it seemed appropriate that our expedition should

miles wide, and some fifteen or twenty miles up-stream from salt water it is 14 miles wide. Above the point where the river widens out preparatory to losing itself in the Pacific it is about the same sort of a river as the St. Lawrence immediately below Montreal, or the Hudson at Albany. During stages of low water the Columbia is a tidal stream for a hundred miles or more from its mouth, but in May, 1925, it had lost all trace of ever having been a tidal stream. The spring freshet was coming down off the high divide. The official water gauge at Astoria showed the river pouring into the ocean at a 20-foot flood stage, and going higher hour by hour. Any tide that might ever have flowed up the bed of the river was obliterated by the flood of water coming down. The current was flowing six miles per hour in front of Astoria when Transcontinental was launched. with a boat with a top speed of about ten miles per hour, there wasn't a great deal of headway left after more than half of our power and speed was consumed in overcoming the current. (Continued on page 130)

The well arranged plan of Gannet, designed by Tams & King for Commander J. K. L. Ross of Montreal and Toronto, provides a spacious and comfortable craft with six state-rooms

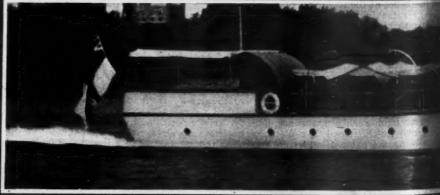
# GANNET, A



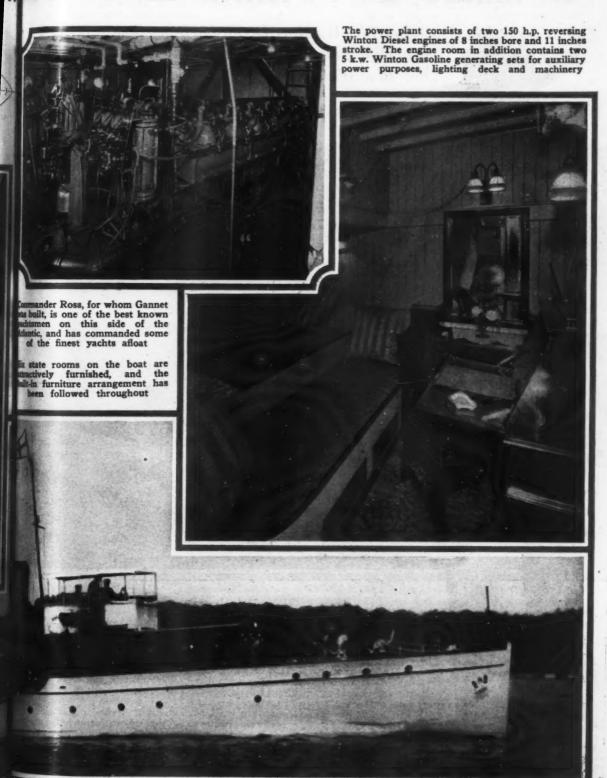


The main saloon on Gannet is forward on the main deck, and the truly nautical system of built-in furniture has been quite strictly adhered to

Gannet was built under the supervision of the designers by Ditchburn Boats, Ltd., of Gravenhurst, Ontario. The boat is a smart looking craft, with a cruising speed of better than twelve knots



# Offshore Cruiser



# HERE'S OTHING TO IT

Assume That We Have Decided to Buy a Boat; to Give Up Dirty Highways for the Never Ending Delight of Cruising Over Blue Water. What Type of Boat Shall We Buy?

Part II

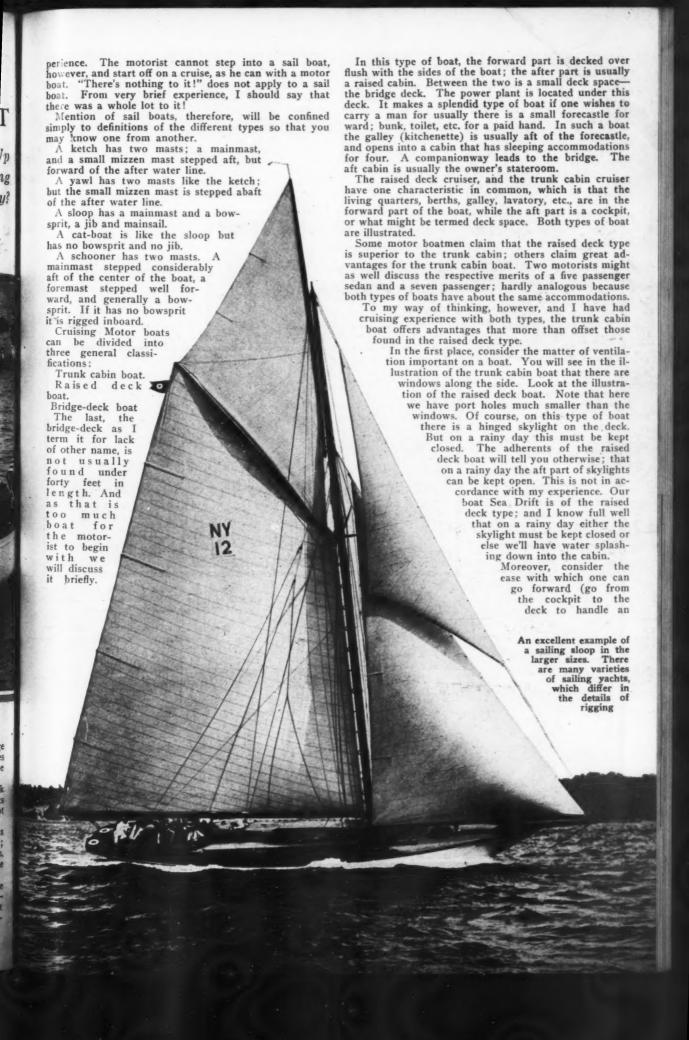
# By Frank Stevens

HIS question looms large in the mind of the motorist. It looms large because some friends will advise one type, others another. And the names they mention will mean nothing to the motorist who is trying to get the problem of boats straightened out in his mind.

These friends will talk of yawls and ketches and schooners and trunk cabins and raised cabins until you are dizzy; they will talk gaff rigged boats versus Marconi rigged until you come to the belief that they are speaking, not English, but some foreign tongue.

At least that was my experience and I have no reason to believe that it was anything but average experience. And you'll probably do just what I did; look the field over and then use your own judgment. But it will not be amiss. I believe, to define the various types and to offer a few suggestions that may be of assistance to you.

In yachting circles there are two schools; the wind-jammers and the motor boat sailors. The first feels very confident that yachting is sailing where the sole motive power is the wind. The second feels just as confident that yachting is motor boating. It is entirely a matter of preference—and expenses the sail of the second feels in the sail of the sail of the second feels in the sail of the sail of



anchor), on the trunk cabin boat. One picture shows a stern view of the typical trunk cabin boat. Notice the small runway alongside of the cabin. Here all that is necessary is to step from the cockpit to the runway and walk forward. On a raised deck boat it is necessary to climb through the windshield; on our boat it is quite an acrobatic stunt.

Again, a trunk cabin boat will yaw around less when at anchor than a raised deck boat, because there is so much less freeboard. Freeboard is the extent of hull from water line to deck. A boat riding at anchor will always face up into the wind. But the wind is always shifting. A boat with large freeboard, therefore, will swing around with every shift of the wind. This is

ally six feet two or three inches. The raised deck boat, however, will give an appearance of greater roominess. If you were to step below in the trunk cabin boat and then immediately afterward step down to the cabin of the raised deck, you would feel that the latter was ever so much larger. As a matter of fact it is a trifle larger for the space near the ceiling on the raised deck boat is inside the cabin whereas on the trunk cabin boat it is outside. This space is comparatively small and is of no particular value. But it gives an effect of great roominess.

ness.

As I have said a discussion of the merits of the two types is almost like discussing the merits of a seven passenger sedan and a five. The thing for you

to do is to study both types and then determine which suits you better.

Either type, in a boat say thirty-five feet long or less, offers all the accommodations of a summer cottage or camp. A typical interior plan was shown last month. Forward is a lavatory with wash basin and toilet. In back of the door is ample room to hang clothes.

Photographs by M. Rosenfeld



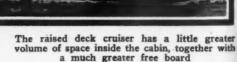
A typical trunk cabin cruiser, which provides deck space alongside of the cabin house, on which one can walk about the boat

not so disagreeable as it is tiresome; especially when living on board.

Both boats have ample headroom in the cabins, usu-



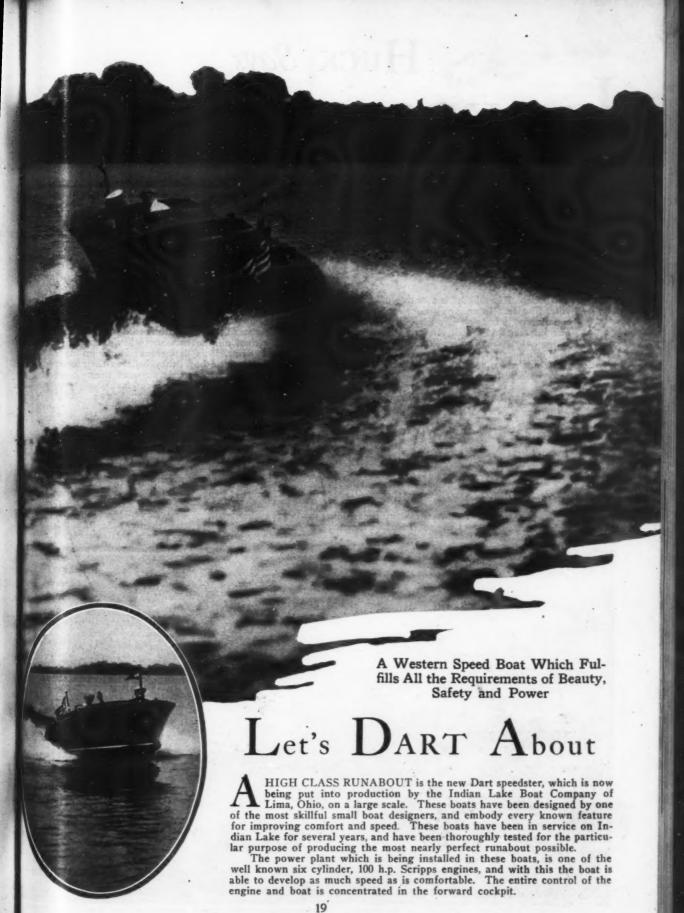
The bridge deck boat is a modification of the trunk cabin with the machinery installed under the decks amidships



A swinging door opens into the cabin proper. Here the two seats shown slide out making berths of comfortable width. The backs of these berths lift up forming two upper berths. And these are comfortable; I can say that from the actual experience. On starboard, immediately in back of the berth is the galley; two burner stove, ice box, which on this particular boat is filled from the deck, sink, drain board, racks for dishes, etc. Opposite, on port, is a clothes locker, and a smaller locker which can be used for charts.

You may possibly wonder if such a gal'ey or kitchenette is practicable; let me say it is, most emphatically so! I have cooked (and cleaned up afterward) in camps of many types and sizes, from a little six pound hise tent to a more or less permanent tent where we had a wood stove. And these do not for a minute compare with the convenience and ease with which a good meal can be prepared in a galley of the size shown. This summer we ran from Racine, Wisconsin, to Chicago. We had a nasty head wind and it kicked up a very disagreeable sea; if

(Continued on page 124)



# JACKSONVILLE is the Yachtsman's Potential Paradise

ELL Chap, I has become a native of Jacksonville, Florida. In case you doesn't know what a native is, it is any feller what spends at least one summer in Florida. Before you does that, you thinks how they must suffer from the heat down here. When you does do it, the only times you suffers is when you reads about how they dies off like flies in New York from some hot spell.

Well anyways, I has something better to talk about than the weather and I wants to know, can you imagine a hundred thousand people living alongside the greatest salt water lake in the country and never even sticking their finger in it? That is what they done in Jacksonville for the last hundred years. It happens this ways: Away back in the 1870s, some reckless guys, they builds a coupla racing sail boats. You knows what racing boats was in them days—all sail and no boat. Well they shoves

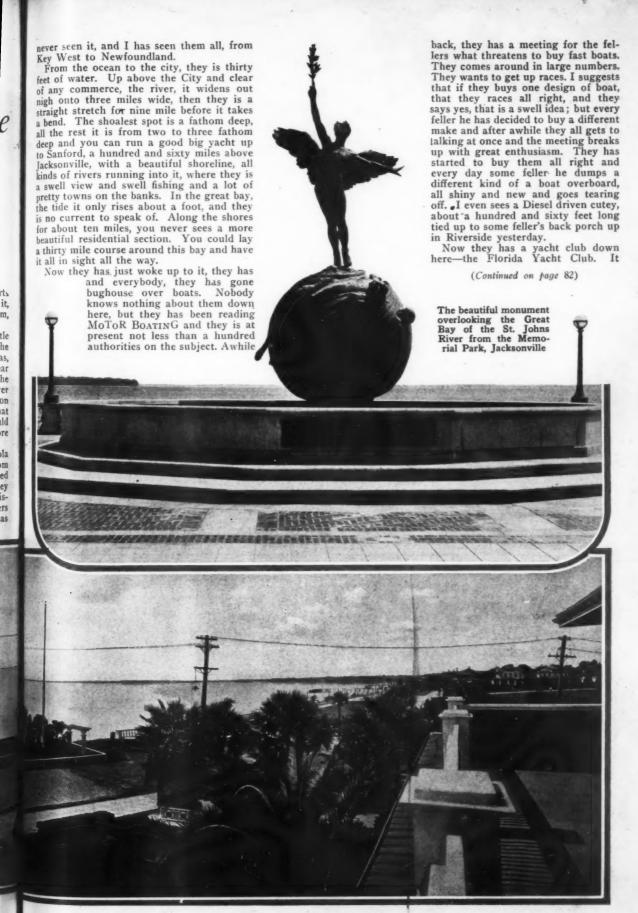
The attractive water front of Jacksonville, with the St. Johns River forming a

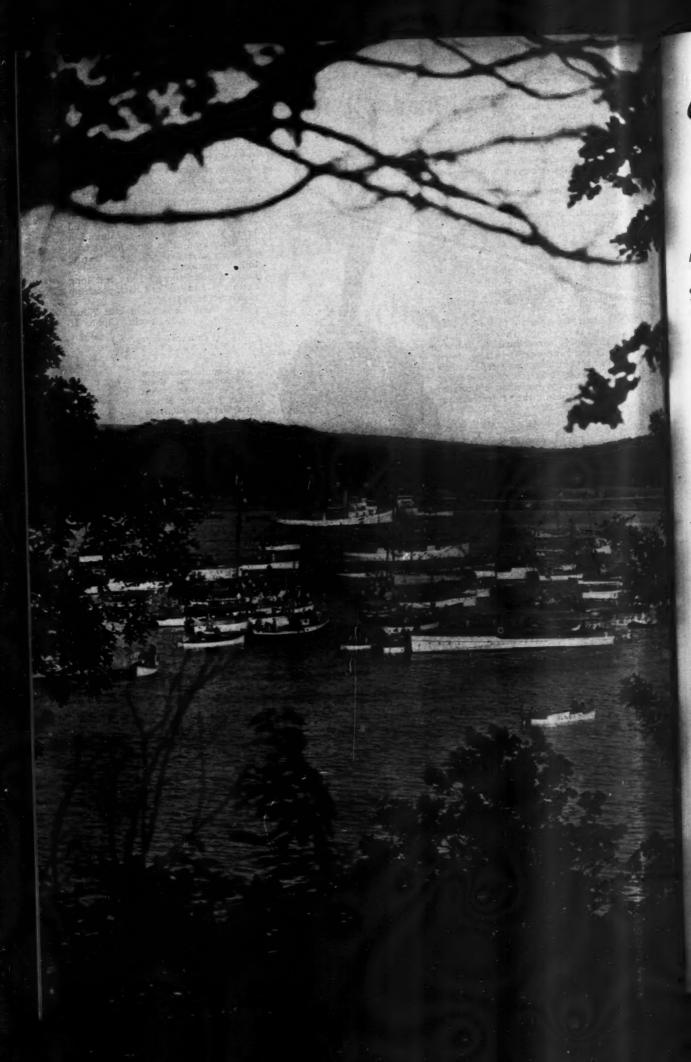
them overboards and has a race. One feller, he takes along a quart in case of shipwreck. About the middle of the race, when the wind, it was blowing fresh, the boat heels, the bottle it starts to slip off'n the lee rail, the skipper he makes a pass at it, his foot it slips, the boat jibes, the boom it crowns him, he falls overboard and gets drowned.

So after that, all the mammas, they tells their little boys, "The River, it is dangerous; don't go near the water," and the little boys, they believes their mammas, they grows up and after that none of them goes near nothing more dangerous than Scotch. That's how the idea gets started. By the time they begins to get over this legend and they was a few timid naphtha launches on the river, the automobile it was invented, and after that the great outdoor sport it was to see how far you could run into the Florida sand with a one lung buggy before you gets stuck.

Now, that, it has all passed. They has built a coupla million miles of concrete boulevards and they is no room on them for us natives, as the roads, they is all blocked up with tourists who is bound somewheres but they doesn't know where. So all of a sudden everybody discovers the river. If they is any body of water what offers a better chance for yachting than the St. Johns, I has







# Reviving the YACHT Club

The Second of a Series of Articles Dealing With the Organization of Clubs-Club Members Advised to Bring the Constitutions and By-Laws of Their Clubs Up to Date

HIS is the second article dealing with Yacht Club Organization. In the last issue of MoToR BoatinG we discussed several phases of yacht club life and emphasized the importance of a well managed club. In the last issue was printed in full, the complete Con-stitution and By-Laws of the New York Yacht Club, one of the country's foremost organizations.

This month we include the complete Constitution and By-Laws of another of our best and most representative clubs-the Columbia Yacht Club of New York City. This is a model which no club can go wrong by follow-

#### CONSTITUTION OF COLUMBIA YACHT CLUB

This corporation shall be known as the COLUMBIA YACHT CLUB of the City of New York.

#### CORPORATE SEAL.

A two-line circle 134 inches in diameter, enclosing Columbia Yacht Club, New York, N. Y. inside of which is a circle enPhotographs by Rosenfeld & Lerick

closing Organized October 8, 1867—Incorporated June 20, 1885, with an outline of Burgee in the center.

#### Article II. OBJECT.

The object of this Club shall be to encourage the sport of yachting, to promote the science of seamanship and navigation, and to provide and maintain a suitable Club House and anchorage for the recreation and use of its

#### Article III. **OFFICERS**

Sec. 1. The officers shall be a Commodore, Vice-Commodore, Rear-Commodore (each of whom shall be a yacht owner at time of his election), a Secretary, Treasurer, Measurer, Fleet Captain and Fleet Surgeon.

Article IV.
DUTIES OF OFFICERS.
Sec. 1. It shall be the duty of the Commodore to command the Squadron, appoint a Fleet Captain and a Fleet (Continued on page 90)



Attractive grounds and anchorage of a prominent Yacht Club at New London



# The Boat-INSIDE

Attractive and Home-Like Interior Arrangements Are Easily Attained by Giving Some Thought to Color Harmony and Avoiding Clashing Effects

By HENRY CLAY FOSTER

The naval architect we have with us always. And marine monstrosities are gradually passing from yacht club fleets to commercial anchorages and finally to abandoned mud flats. The interior decorator we have with us sometimes, and how many classy looking boats are disappointing when we go aboard! The pleasing, graceful lines of the exterior somehow aren't always found inside. And yet there may be—often is—every evidence of lavish expenditure on the interior fittings. In fact, any interior which makes one conscious of cost as the first impression is a failure in all else and a sin against taste.

There is one true saying heard often among the porchchair sailors that, a boat expresses the personality of the owner. Like most sayings of the front-porch squadron, this needs to be analyzed and abridged. The type or model of the boat does express the owner's choice in many instances, but we all know that choice is often made because of advice from someone more or less boatwise than the owner or his better half. And that is as far as the saying is good as to the exterior, except, of course, in the unusual case of the slattern who takes no pride in the appearance of his craft.

But the interior is where the saying holds true. It is like the interior of a home—the minute you go into it you see reflected on every side the type of personality reigning there. The possibilities of variety are almost countless in either case, despite the fact that the boat usually comes furnished—in real estate parlance. The upholstery, floor coverings, etc., however, show the wear and tear of use more quickly than aught else on a boat that is properly used, paint and varnish excepted. So interior decoration becomes one of the big problems in reconditioning a boat, especially when the owner wants to make her look her very best.

Was there ever a cabin on the average cruiser that looked as spacious as the owner would like it? Compared with the rooms back home, almost all are diminu-

Photographs by Levick & Pearce



Note the dull gloomy effect obtained by the all manogany interior. There is no relief from the heavy dark tone in the



The deck saloon on this craft is entirely ruined by the overpowering bizarre effect of the gaudy cretonne hangings. The floor covering is correct and in good taste

tive. And practically all cabins are inclined to be long and narrow. They are usually dark in spite of portholes, hatches and skylights. The question of light, then, is also an item and a big one—bigger, in fact, than many skippers used to dark cabins may think.

The prevailing style of all-mahogany interior, now passing, it is to be hoped, in spite of the fact that many boat builders still cling to it, makes for a dark and gloomy elegance. Likewise it makes the cabin look at least as small as it is, if not smaller. And the cramped

feeling that doctors dignify by the mouth-filling term of Claustrophobia—among lunatics and neurotics—is induced to a perceptible degree in a thoroughly normal person by such an interior. The amount of light required to illuminate an all-mahogany cabin is almost past belief when experiments are made to compare it with a white or light-colored scheme. Immediately a white cabin is mentioned a cry goes up that it is too hard to keep clean, that it is a shame to cover all that handsome woodwork, etc. It is strange how fascinated is the

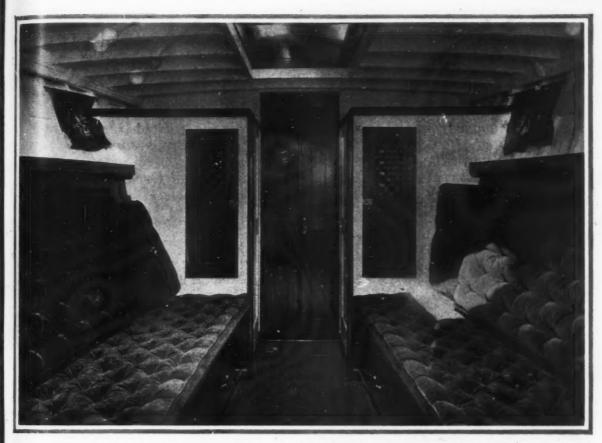
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A similar cabin arrangement to that above. Correctly finished by the builder but tremendously over cushioned. The tablecover and rug are not the correct tone values



A very excellent interior in which there is sufficient mahog any trim and cabinet work to relieve the large area of white paint. Floor coverings and cushions are in harmony

The writer ventures to popular mind by mahogany. assert that its popularity would drop 50 per cent if it cost six cents a square foot.

A little experience with a white cabin makes most boatmen wonder why they ever tolerated the mahogany finish. Whether one has a crew aboard or not, the white walls require mighty little washing save about latches and doors of lazarettes and on protruding corners. A compromise is made in some cabins by having the ceiling of white pine, painted or enameled white or ivory, while the walls and locker doors are mahogany. This gives a

little more light, but a cabin painted white or ivory with the trim only in mahogany is much better in effect.

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Some thought should be devoted to just what lines will be made most prominent in this scheme. And, too, many lines are also bad. But it is by judicious use of these lines that the long, narrow effect of the cabin may be offset to a considerable extent. The light colored walls reflecting light are far less obtrusive and seem inches if not feet farther away on all sides than the lowering, dark, mahogany panels.

determine largely the effect when the walls are light. vertical lines predominate on the forward and aft bulkheads, the cabin will look narrow and high. If horizontal lines predominate the effect will be of width and more proportionate height. And if the cabin is long the predominating lines on the side walls should be vertical. This is often difficult to accomplish, but neat draperies with valances pointed on the lower corners and tiny tassels suspended therefrom, hung from little brass rods above the portholes, tend to break the long horizontal appearance of the side walls.

Small mirrors with narrow frames covering the blank spaces between two or more portholes on each side wall add much to the effect of spaciousness. To give the best effect they should extend almost the entire dis-tance from one port to the other and their frames should be the same color as the wall if the lines are many in the cabin. Tastes differ, of course, but beveled glass, however dressy its appearance, adds just four more lines to the interior. A small picture or two, not over eight by ten inches in any cabin and smaller by a couple of inches for (Continued on page 60)



The dark lines made by the mahogany trim This horrible example shows how the tendency to over decorate will ruin a cabin. The reed work is clever but unsuited to boat purposes

# By Water to GOTHAM

By Lewis R. Freeman

Storms and Obstinate Seas Hamper the Progress of the Voyage from Milwaukee to New York in the 18-Foot Open Boat, Powered With An Elto Engine. Preparedness Against the Onslaught of Sudden Cyclonic Storms Saves the Expedition from Destruction on Several Occasions

#### Down The Great North Channel

#### Part IX

PAULINE Pateman was the widow of a lumberjack killed in a log-jam the previous year. Her little guest-house was as prim and pretty as its fair mistress. And the savour and sight of that waiting supper strum the chords of gustatory memory to this day. Prepared in the brief half hour that had elapsed since my boat had rounded the westerly point of the bay, it amply bore out the claim of the youngster who guided me cross-lots to the gate at the head of the hollyhock and petunia-bordered walk.

"Polly Pateman is as good a cooker as she is a looker," he had assured me; and—there was Polly curtesying and

dimpling welcome at the door, and there was the supper steaming and sizzling welcome from the kitchen. Hot scones and sweet clover comb-honey! Mushroom omelette! Baked whitefish! Wild strawberries and cream thick enough to spread with a knife! Apple pie with a crust so tender that it almost faded away before one's gasp of anticipation! Caviar, from a sturgeon netted in the bay! And—oh, yes, the Customs Collector had surmised aright when he reckoned that "Jim had been attacked by the deer again." Polly confessed she had learned that trick of larding a haunch of venison in countless tiny slits from a French-Canadian guide.



Presently, when it was clear that I had really come from the other side of the boundary beyond all reasonable doubt, I was informed of the "deer menace." Ontario had very strict game-laws, it appeared, but in the case of moose, deer and other horned animals capable, when enraged, of doing grievous bodily injury, there had always been a very liberal interpretation in favor of the hunter forced to kill one in defence of his life.

With the burden of proof up to the wardens, there was no need for a man to take undue chances in stopping with a bullet the charge of an infuriated bull or buck. And as the deer of Cockburn and Mantoulin Islands had an especially sinister reputation for attacking unprovoked and without warning, it was not considered safe to venture far from the main-

travelled roads unarmed.

It also appeared that some men were more liable to unprovoked attack than others, and among those most susceptible locally was "Long Jim" McPherson. Jim, who boarded with Polly when work was slack in the logging camps, lounged by the fire, cleaning his battered old Win-

chester the while, and told of the Damoclean threat that ever seemed to hang over him in the woods. He was always being rushed unexpect-

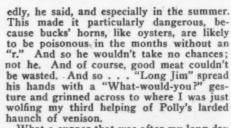
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The big marine railway car on the Trent Waterway, which carries boats over a hill





What a supper that was after my long day on the lake! And how priceless the hour that followed, with Jim and me swapping yarns about stopping wild animals in full charge with our unerring rifles, and fair Polly pausing in her dish-washing to regard now one and now the other with half-twinkling, half-wondering eyes, puzzled to know which was drawing the longer bow!

Polly had prepared me a room as fresh and fragrant as the perfume of lilac bloom welling in through the open windows, but Prudence jogged my elbow to warn that it would not be wise to sleep a quarter of a mile from my boat on a night when conflicting wind-gusts scuffling in the street told me that the skirmishing vanguards of the storm which had menaced from the south all afternoon were massing for attack.

The camp set up by Mr. Freeman on Sturgeon Bay Jim, striding confidently through the impenetrable pall of the darkness, guided me back to the tottering wharf. Remarking that the





Large volume of water discharged through the Spillway at Swift Rapids

air was as "striped as a she-skunk," he reckoned that it would be behaving just as ornery before morning.

The streakiness of the atmosphere was indeed remarkable. One moment the perspiration started to your brow as it was lapped by a humid stream of air that might have been simmering in the cauldron of the tropics; the next your face was lashed by an aerial icicle, chill enough to have tumbled from the eaves of the roof of the Arctic. Anon you were buffeted by whirling dervishes of dust-devils formed where the two met and mingled and wrestled for mastery to the accompaniment of shrieks and snarls of frenzied effort.

One had the feeling of being shouldered in the dark by a milling mob of ruffians, an apprehension that he might be sand-bagged or slugged from behind at every turn.

Jim lent a hand to do what was possible in rigging fenders and running extra mooring lines for the boat before leaving me to spread my bed in the rickety warehouse at the landward end of the wharf. Dozing off twice whilst blowing up my air-mattress, Morpheus had both arms around my unprotecting form before I was well inside the covers. Few things in life are sweeter than the sleep that is induced by clean hard work and lungs fanned full of wind driven ozone.

Proof against the earnest efforts of sound and motion to break the strangle-hold of the Sleep God, I was awakened at long last by the shock of cold—very cold—water. My shelter was wallowing like a ship in a gale—a doomed ship on

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the verge of foundering at that. Not only was it rolling rails under at every surge, but it was also leaking like a sieve. Indeed, that simile falls far short of doing justice to the situation. A sieve leaks only through the bottom, whereas that old warehouse was taking water impartially through its floor, roof and sides. When a momentarily bared patch of starry sky, glimpsed through the disintegrating shingles, revealed this triple cataclysm as having its fount in the lake rather than the heavens, I had fair measure of the force and fervor of the bit of aerial Donnybrook raging without.

Not doubting that the ramshackle (Continued on page 106)



The little boat safely tied up at the Douglas boat house

# Navigation by RADIO

What the Government Is Doing in Establishing Radio Beacons. How Radio Bearings Work

By W. F. Crosby

REW people, even among those who already have radio sets, appreciate the important part radio is playing as an aid to navigation. Most of us vaguely think of SOS calls, of ships changing their courses and of the cessation of broadcasting whenever such an emergency arises.

If the commercial and naval radio stations along the coast and great lakes had to depend on SOS calls for a living there would be mighty little radio work on the wave-lengths assigned for such communication. Of course by far the greatest amount of code, traffic, as it is called, is carried on between ships and shore stations and consists of personal messages of greeting or farewell or of business messages. Then we have the high powered shore stations which send out news, weather reports and time signals, all in code of course, but audible to radio operators throughout most of the world.

Sandwiched in between all of this routine message work we come upon the wave-lengths assigned to the United States Navy

for its radio beacons and compass stations. New York harbor is particularly well equipped with such outfits and it is interesting to study how they work.

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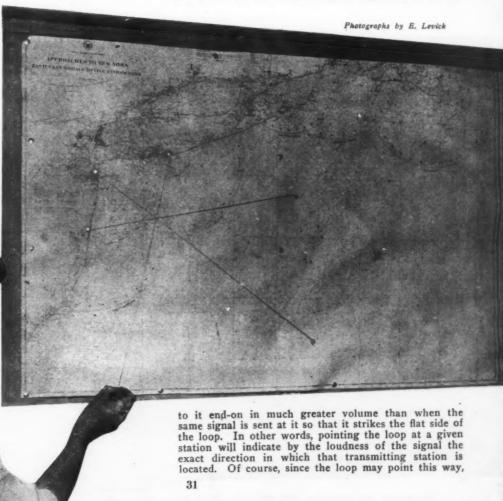
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> Operator plotting a ship's position by means of bearings from each of three radio compass receiving stations

Before going into the working of the plan, it is necessary to first take up something about the radio compass and how it works. In reality this compass is not a compass at all, but a large receiving aerial arranged upon a wooden frame-work in the shape of the letter X. A certain length of wire is stretched around the outer edge of this frame, the amount of wire in use having a direct relation to the wave-length to be received.

An aerial of this kind is usually called a loop, for the simple reason that that is exactly what it forms. No ground connection is used with the set and one end of this loop of wire is connected to one side of the set input while the other end completes the circuit to the other input post on the set. Of course, a particularly sensitive set has to be used for this work in order that it will pick up sufficient energy to make the outfit workable.

The loop aerial or compass is arranged so that it may be turned about by the radio operator and an indicator and compass will give the location of a transmitting set to within a very close margin. The loop aerial has the peculiar property of responding to a signal which comes



it is possible that the station may be either directly ahead or directly astern, the loop is effective at zero and 180 degrees to whatever place it may

be pointed.

The operators of these loops have found, though, that instead of listening to the place where the signal is loudest they will be able to determine the direction much easier if the place of minimum signal strength is chosen. Even with this method, though, the zero and 180 degree

audibility points are still present. The answer is, of course, the use of more than one radio compass station whereby it is possible to take cross bearings on a transmitter. This system was used successfully in the war by both naval stations and in trench warfare. An enemy trans-mitting station could be spotted in almost less time than it takes to tell it, the location given to the artillery and a shell planted on that spot in a hurry.

The United States Navy Department has located about New York harbor several of these radio compass stations and if the captain of an incoming liner wishes to know his exact position he will call the naval station NJY and ask for a bearing. This calling for bearings is permitted through a wave-length of 800 meters only. The actual bearing takes only a few minutes and here is how it works.

The ship's signal is picked up

at the naval station at the Battery on the tip of Manhattan Island and through a system of delicate relays known as remote control, the operator at this point is able to work the an. swering transmitter, NJY which is actually located at Montauk Point. Old station NAH located at the Brooklyn Navy Yard caused so much interference with broadcast programs that it has been practically discontinued except in cases of direct need.

Anyway, the operator sitting in the room at the Battery, is able to com-municate back and forth with the ship desiring the bearings, through a trans-mitting station which is at the end of Long Island. When this operator gives the ship the go ahead signal, several long drawn out dashes are sent out by the ship's transmitter and at the same time all of the local shore compass stations are manipulating their loop aerials to the point where the ship's signal is the weakest. This point, at each station, is carefully checked and the compass bearing in degrees is sent to that operator at the Battery by land telegraph.

Alongside him, on the wall, is a large

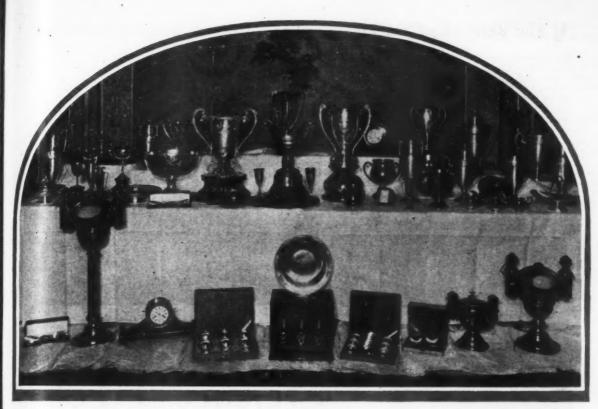
chart of ocean water outside of New York Harbor and at each of the radio compass stations a rosette is located with a length of cord attached at the exact center. As each bearing is received, each cord is stretched taut and, of course, where they cross is the location of the ship.

(Continued on page 74)



Radio compass direction finding station. The large loop aerial is enclosed within the building The





Marvelous array of trophies including the famous Gold Cu p, presented to winners at annual American Power Boat

# A. P. B. A.

New Trophies Offered for Competition Under Association Rules—Cruiser Racing Rules Cause Discussion and Changes Are Made to Improve Racing

By F. W. Horenburger

Surveyor, American Power Boat Association

HE annual meeting of the American Power Boat Association, held in New York on October 29, proved to be one of the most agreeable conferences held by the Association in many years. Delegates from clubs in all parts of the country were present, and the meeting was lively and enthusiastic. Commodore Frederick R. Still, President of the Association, conducted the meeting in his usual forceful style. Reports on the activities of the year were read by the President, Secretary, and other officers, and all tended to show a greater interest in boating and racing than ever before. Sanctions were granted for many more racing events, while afteen new clubs had affiliated with the organization durates.

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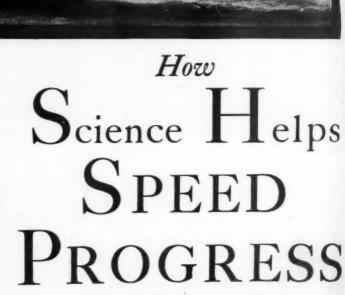
> ing the year.
>
> The Association suffered a severe loss earlier in the the council, and the originator of the earlier racing rules. A suitable memorial resolution was offered, and a copy

> will be prepared, and sent to the family. The matter of pending unx legislation was brought up

by Secretary Hand, of the National Association of Engine and Boat Manufacturers, and it developed that the Ways and Means Committee was favorably dis-posed toward eliminating the usage tax on boats. The posed toward eliminating the usage tax on boats. Committee which brought the matter to their attention made a favorable impression, and their arguments were sound. The fact that the tax was a war measure, and that boats were the only sport implements taxed, was also pointed out to the Committee.

The greatest interest, as usual, centered about the report of the Racing Commission. C. F. Chapman, the Secretary, had spent much time and effort in an attempt to arrive at a more generally satisfactory rule for rating the cruisers. A conference of most of the cruiser racing enthusiasts had been called earlier, at which the rules and proposed changes in them, were thoroughly discussed. It seems that there was great objection to a cruiser rule which did not include the horse power in one form or another. The present formula considered

The Research of the Engineer Leads to Continual Improvement



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The Application of Superchargers to Two-Cycle Marine Engines Holds Promise of Greatly Increased Horse Power Per Unit of Cylinder Volume

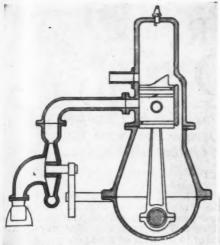
By DAVID GREGG

HE growing interest in the application of superchargers to marine engines has frequently brought up the question, Can the two-cycle engine be supercharged? The answer is, Yes, for although little actual testing has been carried out, the combined design of the supercharger and engine has been so perfected that there is very little doubt about its success.

that there is very little doubt about its success.

The object of the supercharger, of course, is to increase the power. The supercharged induction system, using a centrifugal compressor, while ideal for four-cycle engines, still requires the use of crankcase compression in the two-cycle engine, as the centrifugal compressor does not give enough pressure at low speeds for starting. However, the combination of the induction

for starting. However, the combination of the induction system and the two-cycle engine has a number of advantages. The first illustration shows it adapted to a three-port engine. A two-port engine, using check valves, will work equally well, and will probably give a little greater power for the same size. The supercharger delivers a



The supercharged induction system applied to a two cycle three port engine

thoroughly vaporized mixture to the engine, as all the fuel and air pass through the supercharger and are churned together by the impeller. There is no trouble with the charge in the crankcase being diluted by air leaking in from the outside, through worn bearings or leaky gaskets, as the mixture is always above atmospheric pressure. Higher pressure in the crankcase means greater velocity through the bypass, and more turbulence as the charge enters the cylinders, both factors producing power and smooth running. The fuel mixture passes through the crankcase as a vapor, and does not deposit liquid fuel. As it enters the cylinders under pressure it is possible to force out all the burnt exhaust gas by correctly arranging the opening of the ports.

Crankcase compression has always been the big disadvantage of the two-cycle engine. Liquid fuel in the crankcase cuts the lubricating oil, and when the bearings are worn the engine is hard to start, as air is sucked in on the up stroke of the piston, diluting the charge, and during the down stroke, combustible gas is blown out into the

engine compartment. Each cylinder must have its own separate case, which makes it impossible to use the most advantageous type of construction. With the positive type supercharger illustrated in one of the accompanying diagrams, it is possible to do away entirely with crankcase compression, and use the type of construction and lubrication prevalent in the construction of four-cycle engines. With this type of blower the pressure is not dependent on the speed at which it is driven, but solely on the ratio of the capacity of the blower to that of the cylinder. It delivers fuel and air under pressure as soon as the top of the piston uncovers the intake port. The blower illustrated gives two impulses each revolution, so for a single cylinder engine it is geared at half engine speed, and the rotors so located that the impulses occur just as the intake Port is opened. For a two-cylinder engine the blower is

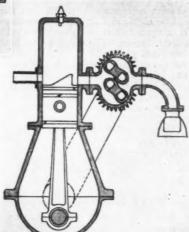
driven at engine speed, and for a four-cylinder en-

Conventional section of two cylinder, three port engine gine at twice engine speed. With three and six-cylinder engines a special blower is used with three lobes on each rotor so that the impulses coincide with the intake strokes.

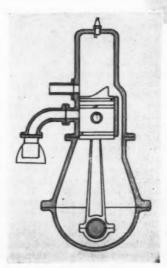
With the poor grades of fuel now in use the supercharger does much to promote smooth running. An ordinary carbureter is capable of vaporizing gasoline that is now being sold. The more volatile ends form a gas, but the heavier particles are atomized as a series of liquid drops in suspension, which does not distribute evenly with the gas, causing some cylinders to run rich and others lean. Hot spot manifolds are partially successful in cracking the liquid fuel, and converting it into a gas. The supercharger acts both as a hot spot, due to the heat of compression, and as a mechanical fuel mixer, with the result that a very even and finely divided mixture is produced that does away with distribution troubles.

As engine design has gradually been improved, the power obtainable from a cylinder of given size has increased. The modern auto-

mobile engine started the ball rolling when one horsepower was obtained for each four cubic inches piston displacement. The airplane engine bettered this with one horsepower for each two and one-half cubic inches, only to be eclipsed by the supercharged racing car engine which develops better than one horsepower for each cubic inch displacement. Perhaps in the near future the supercharged two-cycle engine will do even better. At least, the prospect is most attractive.



A two cycle engine with a positive type supercharger that does away with crankcase compression, and permits a crankcase design and oiling system similar to the conventional four cycle engine



A positive supercharger designed for three and six cylinder two cycle engines. The impulses coincide with the intake strokes of the engine

Since the matter of weight and horse power are directly related to speed, the ability of the supercharged engine to develop much more horse power per pound of weight will soon become apparent as more and more racing craft are fitted with these devices. Their advantages and ability have been thoroughly demonstrated on other forms of gasoline engines, and the marine engine will not be far behind in adopting this improvement.

# SNAPPER, Sailing Dinghy

How to Build a Smart Little Tender Which Can Be Used for Many Practical and Pleasure Trips. A Design Arranged for Amateur Construction, With Sails or Outboard Engines

By Charles D. Mower

**NEXT MONTH A 24-FOOTER** 

pared by Mr. Mower for MoToR BoatinG's readers is the smart little sailing

dinghy Snapper. For the January number the design will be for a very

practical utility runabout of about 24

feet length, and with a speed of at least

18 m. p. h. It requires much time and

thought to turn out a complete design, and they must be in course of prepara-

tion months before they are published.

Readers who have any particular de-

signs in mind, which would be suitable

for publication, are urged to send them to Editor, MoToR BoatinG, 119 West 40th Street, New York, N. Y., so that

Mr. Mower can undertake their prepara-

The first design which has been pre-

SAILING dinghy is one of the most useful small boats that can be built by an amateur as it makes an ideal small boat for general use on either salt or fresh water and there is no better sport in the world than a good lively sail in a fast dinghy in a fresh breeze. The dinghy makes a very good boat for boys and girls who are learning to sail and at the same time is not below the dignity of the older yachtsman or the wife who likes The custom of carrying a sailing dinghy on the davits of the larger sail and power yachts is growing in popularity every year as many owners of the larger yachts enjoy an afternoon sail while the cruiser is lying at her anchorage in some one of the many beautiful harbors along the Coast. The dinghy also makes a very good boat for rowing and is a very practical small motor boat when fitted with an outboard motor.

The design that is shown herewith is intended primarily as a sailing boat rather than the conventional rowing dinghy fitted with a center-board and sail and for that reason will sail much better than the average small sailing dinghy and will make a boat that will go to windward as well as many larger sail boats. It is not too large for the amateur work shop as it does not require much floor space to build her and she can be carried through any door or window of average size by tipping her up on her side so that it is not necessary to tear the house down to get her out of the shop where she is built.

Before starting to build the boat it is necessary to make a full size drawing of the cross sections which are to be used as the building forms, and this is done from the Table of

Offsets given on the drawing which gives all the necessary measurements in feet, inches and eighths to the outside of the planking. This can be done on a large sheet of smooth building paper on which the water lines and buttock lines have been laid out as shown on the drawing.

tion.

The offset table gives the half breadths, or widths from the center line, of the sheer line, the three water lines spaced 3 inches apart above the load water line, the load water line and the rabbet line which corresponds to the width of the keel plank, for each station for the cross sections. The heights given in the table give the distances either above or below the load water line, as the case may be, where the sections intersect the buttock lines and the heights of sheer line and the distances down for the lower endings at the rabbet line. After the lines for the outside of plank are drawn, another line should be drawn parallel to the outside of plank line 7/16 inches inside to give the shape of the form for the inside of the planking. The shape of the stem can be laid out on a separate sheet and a pattern made for it. The form for the shape of the keel should be sawn out of a 2 inch plank, and the plank set up on edge at a convenient height to allow planking the bottom of the boat, and should be set so that the load water line will be level and firmly braced to the floor of the shop.

The keel should be sawn out of a piece of oak 7/8 inch thick according to the half breadths given for the rabbet line which will make the keel 4 1/4 inches wide in the middle at station No. 5 and tapering to 2 inches wide at the forward end and 1 inch at the stern. The keel need not be rabbeted to take the lower edge of the garboard as the inside of the planking will be made flush with the inside of the keel and the bottom of the keel will project below the outside of the planking except at the stern where it will be tapered to the same thickness as the planking. A piece 12-feet long will be sufficient.

The stem should be sawn out of an hackmatack knee, 2 inches thick and shaped as shown on the plan so that it overlaps the forward end of the keel, to which it is fastened. If there is a boat builder near at hand it will save trouble to take the stem pattern to him and have him saw the stem out of a suitable knee. beted to take the ends of the planking which must finish flush with the face of the stem when the job is done. stern should be cut out of a piece of 7/8 inch oak or ma-hogany, and is fastened to the end of the keel with a small oak, or hackmatack, knee as shown on the plans. If it is intended to use an outboard motor it is advisable to use oak and to make it 1 inch

thick to give greater strength and to allow better fastenings. When the keel, stem and stern are assembled they can be set in place on the keel mold that has been previously made and the moulds for the cross sections set up in their proper places and firmly braced so that they are level and at right angles to the center line of the boat. upper ends of the moulds should be made to extend above the sheer line of the boat so that the upper ribband, which is fastened to the moulds, can be left in place until after the boat is all planked and timbered. Additional ribbands are put on to hold the moulds firmly in place while the planking is being fitted and are removed

as the planking progresses.

The frames should be fitted before the planking is commenced and they are to be continuous from rail to rail across the top of the keel, except where cut by the centerboard well. The frames should be of white oak, 5/8 x 5/8 inch and spaced 8 inches center to center. In order to get suitable oak for bending it is advisable to again turn to the nearest boat builder and have him saw out

The stem must be rab-

(Continued on page 86)

# Big Cruisers Use Small Engines

Pronounced Tendency Toward Use of Light Weight Engines Shown in Many Large Boat Installations

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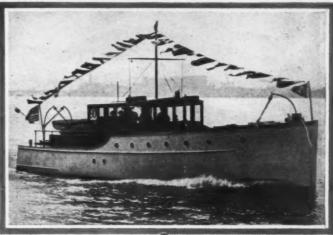
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Henrietta 111, owned by E. H. Scott of Erie, Pa. The show piece on this boat is the engine room in which are three, six cylinder, 65 h.p. Kermath engines, which drive her at 14½ m.p.h. This is remarkable for a heavily built 65 foot boat

One of the standard 38 by 11 foot cruisers, being built in large numbers, by the Matthews Company of Port Clinton, Ohio, and which are being powered with the six cylinder Kermath engine of 65 h.p. This drives these large boats at excellent speed

Every boat in this entire fleet of twelve is Kermath powered and took part in a race for Kermath powered cruisers at Detroit last fall. Three additional boats have not yet entered the picture. The race attracted an unusual amount of attention





# Experience Builds GOOD BOATS

HE boating population in Florida consists largely of visitors to the famous winter resorts, and due to the intense sunlight which prevails during the winter season, open boats are uncomfortably hot without protection against the sun. Chris Smith, who has built many of his famous runabouts for Florida use, has found it necessary to add tops to them for this purpose. The new feature is particularly attractive, and is quite similar to an automobile top. It is made of khaki canvas, with natural oak frames, finished with bright nickel trim. There is no question but what the addition of a top of this nature will increase the usefulness of these boats many times.



Chris-craft runabouts in use in Florida with the new natural oak frame top, with nickel trimmings

# Schillo's

A NEW high speed runabout has recently appeared on the motor boat markets, in the form of a sportabout, built by the Schillo Motor Boat Manufacturing Company of Chicago. This boat, which is 25 feet and 10 inches long, has ample capacity for seven

# Speedy

persons, with two additional in the forward cockpit. In keeping with a quality product, the appointments are the last word in finish and quality. The boat is supplied in two different standard engine arrangements. One of these is 90 h. p., while the other is 200 h. p.



The Schillo sportabout is just under 26 feet in length, and can be driven up to 55 miles with suitable power



A tropical setting on the St. Johns River, near Sanford, Florida

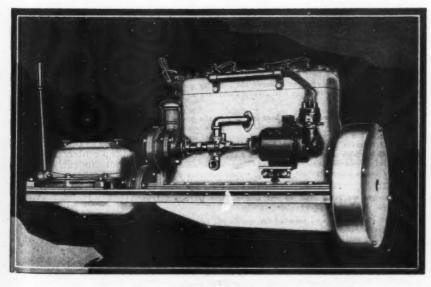
# Sanford to Harbor Yachts

T the head waters of the St. Johns River in Florida is located the city of Sanford, on Lake Monroe. To the cruising yachtsman who makes the journey from the north, this city will shortly offer some of the most delightful facilities and surroundings, where he may rest and take his ease for a few days. A project is under way, whereby a sheltered basin is to be built for the particular use of yachtsmen. This is to be some 575 feet in length, and enclosed by large piers, one of which will be 82 feet in width. The entrance to this basin will

of

be 80 feet wide, which will permit prompt and safe exit and entrance from the sheltered basin. Being located on Lake Monroe, which is a magnificent body of water about 7 by 5 miles in dimension, it is not always perfectly quiet and serene. It happens the wind blows in Florida also, and at such times, the lake has a tendency to kick up. When within the shelter of the protected basin however, the boats can lay at the wharves in thorough safety and quiet. The yacht basin will have a large capacity for boats and will be almost completely enclosed.

# New Fifty Horse GRAY Engine



The newest 50 h.p. four cylinder Gray marine engine

NE of the new model 50, four cylinder engines just developed by the Gray Marine Motor Company of Detroit. This engine is one of several larger sizes which have been under development during the past summer, and which will be marketed at once. For a four cylinder engine of four inches bore and six inches stroke, this machine develops an abundance of power. It is an up to the minute 1926 machine, fitted with all known improvements. Bosch electric starting and lighting devices are fitted. On a weight of 790 pounds, and a speed range from 300 to over 2000 r.p.m. the engine is adapted for cruisers, runabouts, and work boats. It is a very substantial machine.

# SMALL MOTOR BOATS

### Their Care, Construction and Equipment

Questions Submitted for the February Prize Contest

Describe and illustrate what changes you would make to a four-cycle marine engine in order to increase its maximum rated power per cubic inch displacement.
 (Submitted by A. S. R., New York, N. Y.)

 Why should every boat enthusiast attend the annual Motor Boat Show, and what benefits will he obtain by making this trip? (Submitted by V. L. S., Wimmigton, Del.)

# An Auxiliary Ignition System

An Entirely Separate System Insures Greater Reliability and Freedom from Possible Delays, Due to Failure of Ignition

Answer to the Following Question Published in the October Issue

"Describe the best method of placing on a gasoline marine engine with magneto ignition an entirely separate ignition system to operate where there is only a single set of spark plugs."

#### Auxiliary Ignition for Marine Motors

(The Price-Winning Answer)

HE ignition systems as used on modern marine motors are practically fool proof and free from trouble, if given a little attention occasionally. The high tension magneto system supplies the ignition current without batteries, but the engine must be turned fast enough to cause the magneto to function in order to start. The battery system takes the current from the starting or lighting battery. The current passes through a low tension timer, which is a circuit breaker, to a non vibrating coil, where it is transformed to high voltage, and then through a distributor to each cylinder in correct firing order. Almost any engine may be equipped with both systems, the battery system acting as an auxiliary to the magneto. This double ignition will not make the engine run any smoother or with less fuel neither will it give more power as some believe. It is however, of value in determining the cause of irregular operation and as an auxiliary in case the magneto goes bad. The ad-

vantage of the double ignition system is that one can determine if irregular operation is due to the ignition, by running the engine first on one system and then on the other. If after the engine has been missing on the magneto it fires as it should on the battery, it is reasonable to assume that the magneto system is not functioning properly and vice versa. If the engine does not run right on either system the fault is very likely elsewhere. Battery ignition also makes starting much easier when the engine is cold, especially where no mechanical starter is provided. Start on the battery and then throw over on the magneto.

The only difficulty encountered in installing an auxiliary ignition system on many motors is in attaching the timer and circuit breaker. These are, in most systems, incorporated in one case and driven at camshaft speed through gears. Some manufacturers make provisions for either system, which makes the installation a very simple

matter. There are several outfits of different manufacturer suitable for this purpose and the manufacturer can be of great assistance in providing or suggesting the material necessary for fitting their product to your engine. Where no provision has been made for attaching auxiliary ignition apparatus to the engine, the situation will require much careful thought in working out the drive and method of fastening the unit. Nothing further than suggestions can be given here as practically every engine will be different. If the camshaft extends outside the crankcase, or can be extended, the outfit can be attached to it. Bevel gears can, in some cases, be arranged to drive from the magneto shaft. In any event, the drive must be positive.

On some engines, where it is not practical to attach the single spark mechanism, a timer and four vibrator coils can be used. Often a place to attach the timer can be found when there is no place to hook on a single spark outfit. A vibrator coil outfit requires quite a few more wires and is not as reliable as the single spark system; but notice your neighbor's Ford, which has vibrator coil

ignition.

#### Rules for the Prize Contest

READERS are urged to consider the above questions for the February issue, and send answers to them to the Editor, MoToR BoatinG, 119 West 40th Street, New York, N. Y. Answers should be (a) in our hands on or before December 25, (b) about 500 words long, (c) written on one side of the paper only, (d) accompanied by the sender's names and addresses.

The names will be withheld and initials used.

QUESTIONS for the next contest must reach us on or before December 10. The editor reserves the right to make such changes and corrections in the accepted answers as he may deem necessary.

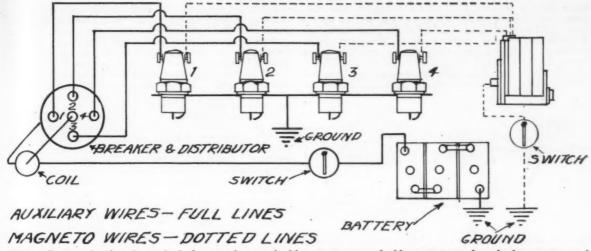
The prizes are: For each of the best answers to the question above, any article or articles sold by an advertiser advertising in the current issue of MoToR BoatinG of which the advertised price does not exceed \$25, or a credit of \$25 on any article which sells for more than that amount. There are two prizes — one for each question — but a contestant need send in an answer to only one if he does not care to answer both.

For answers we print that do not win a prize we pay space rates.

For each of the questions selected for use in the following month's contest, any article or articles sold by an advertiser advertising in this issue of MoToR Boating of which the advertised price does not exceed \$5, or a credit of \$5 on any article which sells for more than that amount.

All details connected with the ordering of the prizes selected by the winners must be handled by us. The winners should be particular to specify from which advertisers they desire to have their prizes ordered.

After the auxiliary ignition apparatus has been attached it must be timed to fire the mixture at the same time as the regular ignition system does. The method of timing an engine is easily understood. The spark lever is set in a midway position on the quadrant and the inlet valve of No. 1 cylinder watched as the engine is slowly turned by hand. After the inlet valve closes, which shows that the piston is starting on the compression stroke, insert a rod or screwdriver through the valve cap opening to determine when the piston is at the end of that stroke and on dead top center, and set the mechanism to fire at this Another method, point. slightly more accurate, is to work from the next cylinder to fire, it may be No. 2 but more likely No. 3 as most four cylinder engines fire 1-3-4-2. Just after the exhaust valve has closed and the inlet has begun to open, No. 1 piston will be on dead center of the firing stroke and with the spark lever in the center of the quadrant, set the device to



Wiring diagram showing the method of connecting two ignition systems to a double contact set of spark plugs as proposed by W. B. M.

fire No. 1 cylinder. Where a magneto system is already installed it should be a simple matter to remove the distributor cover and note when the brush makes the circuit

for any particular cylinder and set the auxiliary to make contact at the same time. After the position of the distributor and timer have

(Continued on page 150)

# Scuppers In the Small Boat

A Quick Method of Draining Sea Water or Rain from the Cockpit of Small Boats Is a Safety Feature Which Should Not Be Neglected

Answers to the Following Question Published In the October Issue

"What is the best method of installing scuppers in the small craft, so as to provide quick drainage, and eliminate any water backing up through them when the boat keels over or in a heavy sea;"

OST of the craft today, particularly those in the small boat class, have their cockpit floors raised so as to be about six inches above the running waterline, equipped with either two or four lead pipe scuppers running from the corners of the cockpit straight overboard, and with no provision whatever to prevent a sea from washing in or water backing up through them in case the boat is grounded and heels over at low tide. Now this may be all right for those craft which are always anchored or operated in fairly deep water with little possibility of grounding; but, there are a large number of boat owners who must keep their craft in shallow creeks, rivers or harbors, where there is a run of tide sufficient to ground and heel over their boats at the low of the ebb, and in cases of this sort there is always the possibility of their boats heeling over far enough for water to back up through the scuppers into the cockpit when the tide starts flooding. Unless their cockpit floors and siding is absolutely watertight it is certain to either sink or fill these boats, and then they have a nice mess on their hands. Personally, I have had three such experiences and know just what it means in labor, cost and lost use of the boat to get things back into shape again; consequently, I tried several methods to eliminate this danger, with more or less unsatisfactory results, and only recently I discovered what seems to be a real solution of this trouble. This system had been thought out and installed by a fisherman who operated This system had been a small trunk cabin work boat with a self-bailing cockpit aft. As this boat was anchored in a small creek, where a six foot tide left it high and dry on a hard clay bottom, it lay heeled over at an excessive angle and had sunk once from water backing up in the cockpit. For this reason, this fisherman started devising some means by which this cockpit would free itself of rain water or seas breaking over, without any possibility of the water reversing the flow at any time whatever. The following description follows faithfully the system as installed by this genius, and it can very readily be installed on most

small craft with but few changes.

In the first place, he raised the cockpit floor until it was twelve inches above the waterline when running, and this was sloped so that all water would drain to the forward part, thus making it necessary to use but two scuppers instead of four. As the forward end of the cockpit was about amidships, this placed the scuppers in such a position that although either end of the boat would be down, they were about the same height above the waterline. The first set of scuppers installed were made up of brass pipe fittings and equipped with check valves to prevent water from backing up inside. These were thought to be satisfactory until a small piece of waste became lodged in one of them and water backed in one night until the boat was half sunk. This was cleaned out and a piece of coarse copper screen wire tacked over the inboard ends of the scuppers, but still on two occasions the checks became fouled with dirt, etc. The next scheme was the installation of leather flaps over the outboard ends of the scuppers, with the thought that they would be closed tight against the hull sides by the water pressure and keep out the bulk of the water even though the checks became fouled; in other words, here was a system of double checks. This scheme, while very excellent while the boat was on an even keel or running, was not satisfactory from the standpoint of keeping water out. These scuppers were re-moved, and the copper screening thrown away, as it had been a nuisance from becoming clogged all the time. The next ones put in were made of two inch lead pipe, flanged and nailed both inside and outside the hull, and with canvas instead of leather flaps tacked over the outboard ends. Cork plugs were

made for the inboard ends of the scuppers, and they were kept plugged except when the boat was in operation. This stopped the possibility of the boat filling, but did make it necessary for the owner to pump out all the rainwater. After a particularly heavy rainfall, which lasted for several days, this fisherman hit on the scheme

Of running these scuppers across the boat underneath the cockpit floor, in-

V. L. S. places his scuppers in a molded strip, and drains them overboard at the opposite side of the boat

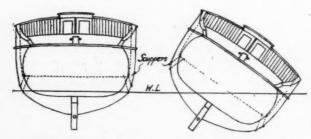
stead of straight out the side as formerly, but with the canvas flaps over the outboard ends to prevent seas from forcing water into the cockpit. As this seemed to be a feasible solution to the problem, sufficient lead pipe was purchased and the installation completed. After being in use for three years, this fisherman is thoroughly satisfied with the results obtained, and all his trouble from this source has vanished; therefore, as it has been so satisfactory in this case, it stands to reason that you can have the same results on your craft.

In order that everything will be as it should, however, a few little things must be considered; and here

they are:

Raise the cockpit floor at least twelve inches above the running waterline, sloping it so that all the drainage will be to the two forward corners where the two scuppers are to be installed.

Look over the illustrations carefully, make your corner flooring strake as shown from one piece of white oak, sort of hollowed out so that it will act as



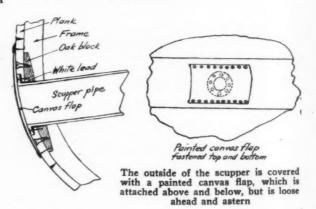
These diagrams by V. L. S. show the danger involved in the ordinary type scupper, when the boat heels over, and the cockpit can fill with water. With the crossed scuppers, no water can enter.

a gutter, and allowing a portion of it to extend upwards and become a part of the cockpit siding; thus preventing leakage of rainwater through the seam which would ordinarily be there.

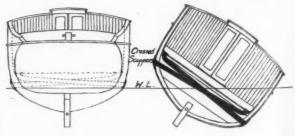
Make the scuppers out of lead pipe; which, while expensive in first cost, is cheap in the end, as they are easy to work and last forever. In boring or cutting out the hole in either this corner flooring strake in the cockpit, or through the hull sides, be sure and get these holes a neat fit around the outside of the lead scupper pipes. Also, chisel out around these holes so that the flanged portions of the scuppers will finish flush with the wood. It is best to fasten an oak block in back of the hull plank

which takes the outboard ends of the scuppers, before the hole is cut. Then cut the hole through both the plank and this block, chisel out for the flange, run the lead pipe through, place a little white lead putty or seam composition all around this hole, flange the lead pipe carefully so as to make a neat and tight fit, and then fasten the flanged surface into place with small tinned or galvanized nails. By drawing the flanged surfaces down on the putty or seam composition in this manner, you will have an absolutely watertight job at this point.

The sketch will show the approximate positions for both the inboard and outboard ends of the scuppers; however, in order that no one may become confused, I might add that each of these scuppers are entirely separate. The idea is to allow the water in the cockpit to run into either or both of these scuppers at the forward portion of the cockpit, run down and across underneath the floor through these pipes and come out and overboard at some point at or near the waterline. In one of these sketches, you can readily see that even though the boat is laying heeled over at a dangerous angle, it is impossible for any water to find its way up into the cockpit, as the inlet for the submerged outlet of that scupper is well up in the air on the opposite side of the boat, far above the water level. And this result is obtained without the aid of any kind of check valves, which are more or less liable to become clogged and fail to work just when most needed.



The canvas or leather flaps, (oiled and painted canvas is preferable), are tacked over the outboard ends of the scuppers, for the sole purpose of preventing side seas from forcing water into the cockpit. These flaps are securely fastened into place, top and bottom, with either long galvanized tacks or small galvanized nails, with the canvas left a trifle loose between these two rows of top and bottom fastenings, so as to allow room for water to drain overboard from the cockpit. Any sea washing against the side of the hull would press these flaps fairly tight against the flanged surfaces of the outboard ends



of the scuppers, and prevent any water from being forced in the cockpit. Canvas flaps, well oiled with linseed oil with the outside painted to match the adjoining woodwork, are not unsightly, are flexible and long lived. On the other hand, those made of leather soon became stiff,

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Left: Puzzle, winner of 725 Runabout class. Right: Buddy, winner of 1½ liter class. Photos by M. Rosenfeld, N.Y.



A clean sweep for Valspar!

Doc's II, Puzzle, Century, Peggy, Buddy, Miss Houston IV, and S. C. S.—what a list of names! Every one a champion, and every one Valsparred!

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All of which goes to show that however much Champions may vary in design and power equipment, in the matter of finish they adhere strictly to precedent—Val-

spar, of course



Below: S. C. S., winner of 151 and 215 classes.



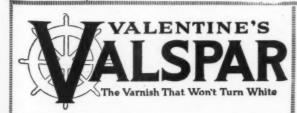
Above: Miss Houston IV , winner of 510 class.

Above: Doc's 11, winner of 725 and 1100 Hydroplane class and Webb Trophy Race.

Righs: Peggy, winner of 610 class.



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 buckle out of shape and soon rot from the alternate wet-

ting and drying.

In case lead pipe is too expensive, these scuppers can be made up from galvanized pipe and fittings, but around salt water, they would not last forever, and would need renewal. Also, using pipe fittings, it is a much harder proposition to make a neat and watertight job, than when using the lead pipe.

This system has certainly one appeal to the average small boat owner who as a rule does most of his work,

and that is simplicity.

V. L. S., Wilmington, Del.

### Scuppers for Small Cruisers

A NUMBER of years ago we built a small raised deck cruiser with what was supposed to be a self-bailing cockpit. This cockpit being but a few inches above the W. L., as soon as the boat began to roll in a seaway the water squirted back through the scuppers, which were located in the forward end of cockpit, so that the open-

ings had to be plugged up while under way.

To overcome this difficulty a wood pattern was made for a shallow scoop and two bronze castings obtained from the local foundry. These were screwed over the scupper openings outside the hull, which were below the waterline, with the openings pointing aft. There was no provided the score water backing up accept when going. more trouble from water backing up except when going astern and then but a small quantity came aboard, or when at anchor with a large party aboard heeling the hull. As may be seen, the scoops will draw out any water which reaches the cockpit as spray or rain while under way and even with the boat rolling on its beam ends, none will come back through the scuppers. The addition of a couple of bronze deck plates set in over the deck scuppers and flush with cockpit completed the installation and made

easy the plugging of the openings when desired. For a boat with H. H. P. provides a screw cap and a bronze scoop on the outboard end of his scuppers water be when back

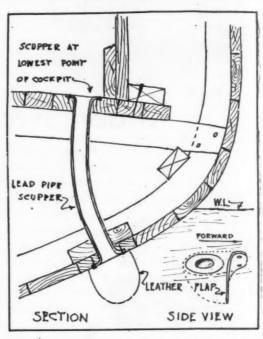
a high speed reverse, should forced going astern, a scoop would be made with

a swinging vane, and both ends open, the vane being pivoted in the middle so that whether going ahead or astern, the vane would swing in the opposite direction

and prevent any water backing up.

Lead pipe is best for the scuppers as it is easily bent and flanged; bore holes in cockpit deck with an expansion bit large enough to take the scupper pipe with the deck plate hub forced into it. Set flange and deck plate in red lead and screw down flush with deck so that all water can drain off. Bore hole through hull as high as

possible without having to make a sharp bend in a scupper pipe; force pipe end through (do this before fastening to cockpit deck) and drive in a tapered wooden plug from outside to swell the pipe into the hole. Before removing plug, apply red lead, flange pipe end over carefully and fasten to planking with small brass or galvanized iron screws; tacks are too liable to loosen.



A. G. W. closes scuppers with a flexible leather flap

Then remove plug and screw scoops into place with open ends pointing aft.

It its best to have the cockpit deck drain aft, so that when the hull settles under way, water will all run aft and be assisted by forward motion of hull as well. But if the water should run forward, the scuppers must be located at the forward end of cockpit. Most important of all, be sure to make the scuppers large enough; two inches is none too large, but have hull openings come in the middle of a plank and if too much of the plank is cut away, place an oak block behind, between the two frames, and fasten well with brass or galvanized screws, not nails.

H. H. P., Los Gatos, Calif.

### Lead Pipe for Scuppers

PROBABLY the best method of installing scuppers is the simplest one.

Heavy lead pipe is the best material to use. The diameter should be large enough to permit the water to

drain away quickly.

The run of the scupper should be as direct or as easy as possible so as to avoid any traps which may freeze up in winter and also cause stoppage due to the accumulation of dirt. A lead scupper with an easy curve may be easily cleaned of dirt and barnacles by means of a piece of soft

To install a lead scupper, one end should be neatly flanged about one-half inch. This is done by holding the pipe against the edge of a solid object so it projects about a half inch or so and then lightly tap the inside of the pipe end, until the required flange is made. If it is necessary to bend the pipe to any extent, fill it

with compact sand to avoid kinking it. A plumber uses a spring which slips into the pipe and is withdrawn after a spring white the bend is made. (Continued on page 150)

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# China is the Sine Qua Non of Yachting Hospitality

HEN the mess pennant is flying in the halyards and the guests tumble down the hatch to brace up the innerman, what kind of china greets their eyes as they gather 'round the festive board?

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# YARD and SHOP

### Notes of Interest to Both Owner and Manufacturer

### A. J. Utz Joins Bruns Kimball

A nanouncement has been received from Bruns Kimball & Company, of the entrance into the concern of Arthur J. Utz, who will handle sales in the Metropolitan territory. Mr. Utz is widely known among yachtsmen, and has had long experience in the marine engine field. He has spent some fifteen years with the Sterling Engine Company, and for the last six years has had charge of the sales of the Hall Scott Motor Car Company. He is well qualified to handle sales for Bruns Kimball & Company, who are the distributors for Sterling and Kermath engines in the eastern territory, with a branch in Philadelphia. Interesting plans are under way which will render service to customers far beyond anything previously attempted in the marine industry.

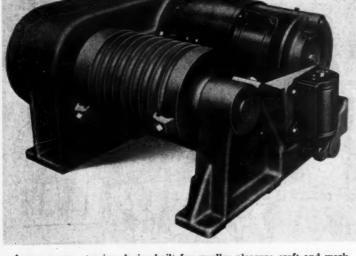
Also associated with Mr. Bruns is J. S. Lobenthal, who



A fast little 20 foot runabout built by Fitzgerald and Lee at Alexandria Bay, New York, and powered with a model 251, six cylinder, Continental Van Blerck engine

through the desired angle. Returning the wheel to the center position turns off the current. When the current is thrown on it passes through a solenoid which releases the holding brake as the motor starts. The moment the current is turned off the holding brake is automatically applied. This brake checks the motion of the rudder instantly and holds it at the desired angle until the wheel is turned again.

No current is consumed except when the rudder is being moved. The positive action of the steerer insures instant response to the wheel at all times and eliminates all drift or lag. The gear is a self-contained unit of the non-follow-up type and can be located wherever convenient. It is only necessary to run four wires from the control unit in the pilot house to the drive unit.



A new power steering device built for smaller pleasure craft and work boats, by the American Engineering Company of Philadelphia. The connection from pilot house to rudder consists of four wires

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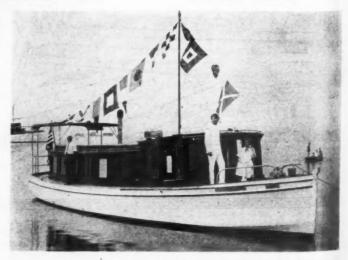
A name is being sought for a publication issued by the Enterprise Company, Inc., of Buffalo, which will be issued in the form of a monthly magazine, and which has not as yet been christened. A (Continued on page 59)

is active in the selling end, and in charge of the marine engine show room at 50-54 West 17th Street, New York, N. Y. The Philadelphia branch is in charge of Frank E.

### New Power Steerer

A new type of electric steerer is being built by The American Engineering Company, Philadelphia, for use on small work boats or pleasure craft where the cost ordinarily might prevent the use of power steerers. This steerer consists of a very small, compact and efficient motor drive and drum to take the rope from the tiller or quadrant. The gearing between the drum and motor is of the spur gear type and is totally enclosed, running in an oil bath on roller bearings. The control unit in the pilot house is a non-magnetic bronze column, with a wheel of bronze or inlaid mahogany with bronze hub. It consists simply of a motor controller operated by the wheel.

A slight turn of the wheel from the center position throws on the current in the motor, rotating the drum until the rudder is turned



A 45 foot cruiser owned by Dr. J. F. Detweiler of Biloxi, Miss., which is powered with a 36 h.p. model JC Regal engine. The boat was used on the Gulf and rivers near Biloxi

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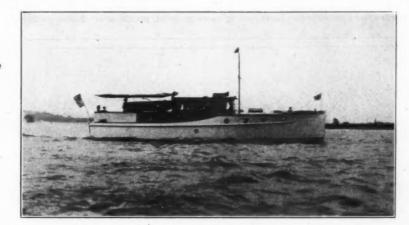
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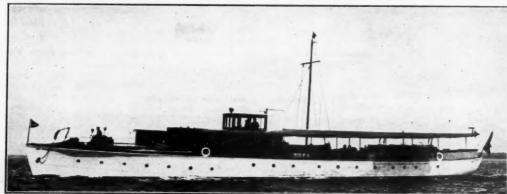
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On this page are shown a few representative yachts selected from our large lists. Should none appeal kindly acquaint us with your requirements. Full information regarding costs to build, purchase or charter yachts of all types gladly furnished.



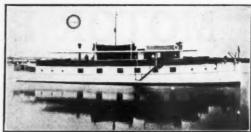
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This will enable us to submit accurate and complete information regarding available yachts and houseboats in the South and to render (gratis) assistance of value to yachtsmen, who intend to cruise in Southern waters.

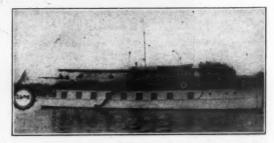
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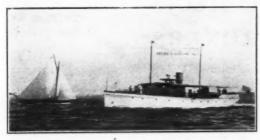
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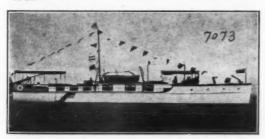
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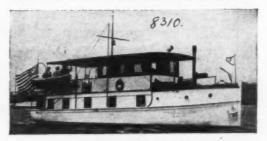
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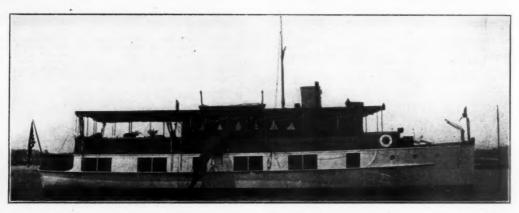
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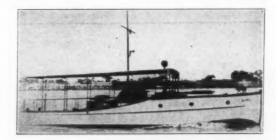
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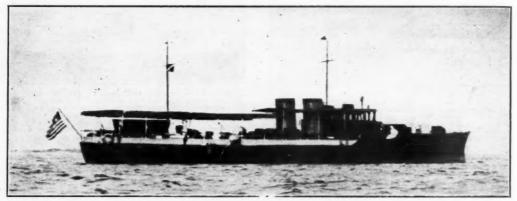
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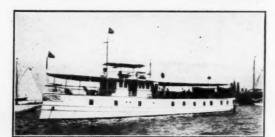


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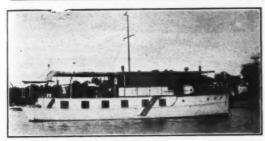


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x13'	×4"	Bridge Deck
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x18'6"	x2'6"	House Boat
x17'6"	x3'	House Boat
x18'	x3'6"	House Boat
x14'	x3'6"	Bridge Deck
x17'9"	x4'	House Boat
x19'	x4'6"	House Boat
x15'5"	×4"	Steam Yacht
x30'	x7' .	Passenger
	x10' 'x10'7'' x14'6'' x14' x15'2'' x16' x16' x13' x10' x15'6'' x18'6'' x17'6'' x18'4' x17'9'' x19' x15'5''	x10" x3'6" x10'7" x3'4" x14' x3'6" x14' x3'6" x15'2" x4' x16' x4' x10' x3'6" x16' x2'6" x16' x2'6" x17' x3'6" x17' x3' x18' x3'6" x14' x3'6" x14' x3'6" x17' x4' x15'5" x4'

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120'	x22'	x3'6"	House Boat	(2)	220 H.P. Standards

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		_	TITLD OF
38'	x 9'8"	x3'	Bridge Deck
38'	x10'	x3'3"	Bridge Deck
10'	x9'6"	x2'8"	Bridge Deck
40'	x 9'6"	x3'2"	Bridge Deck
42'10'	"x10"	x2'9"	Bridge Deck
45'7"	x12'3"	x3'6"	Bridge Deck
49'11	"x11"	x3'	Bridge Deck
52'9"	x 9'6"	x3'3"	Bridge Deck
55'	x13'7"	x3'3"	Bridge Deck
64'	x12'	x4'6"	Bridge Deck
65"	x14'9"	×4'	Bridge Deck
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83'9"	×14'	×4'	Bridge Deck
103'6"	x14'7"	x3'11"	Bridge Deck

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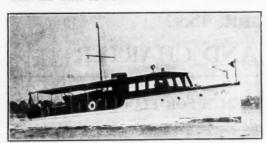
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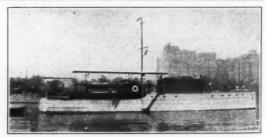
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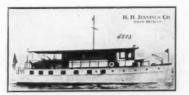
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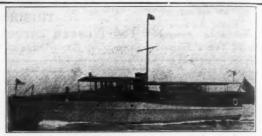
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Four Cyl. four cycle with gears:—Universal 244, \$165. Kermath 4x4 with electric starter, \$330. Wisconsin Model AM 4½x5½, \$375. Doman 4½x5, \$315. Miller 5½x7, \$425. Sterling 5½x7, \$430. Model D Gray 3½x4½, \$250. Four cycle with gears:—Dunn 3 cyl. 3½x4, \$75. Frisbic one cyl. 6x5, \$145. Wolverine 5½x7. \$455. Capitol 3 cyl. 7x9, \$265

Two cycle without gears:—2 H.P. Detroit \$25, 4 H.P. Knox \$85, 6 H.P. Havanna \$45, 10 H.P. Uim \$65, 16-20 H.P. Gray \$55, 2 cyl. 10 H.P. Gray \$55, 2 cyl. 10 H.P. Gray \$55, 2 cyl. Model T, \$815, 40 H.P. Pierce-Bud 4 cyl. \$375. BADGER MOTOR COMPANY, Milwaukee, Wis.

HOUSE SHIP-103 feet long Z feet beam. Six cabins, large saloon and galley. Can accommodate large party comfortably. Electric refrigerator, pumps, etc. Price \$9,000.00 THE SALES CORPORATION, Alexandria, Va.

BARGAIN—New Doman 444x6, 4 cylinder engines. Suitable for cruisers. Special prices. \$188.00 and up. HUNTER BOAT CO., Dept. C., McHenry, Ill.

YACHT FOR SALE at a great sacrifice, owing to owner's family being scattered—110 feet overall—14 feet 8 inch beam—250 H.P. engine—will accommodate ten people besides crew-finished in mahogany and white—single and double staterooms, baths—just the boat for Southern water—communicate with R. H. Arnold Co., 120 Broadway, New York.

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FOR SALE—Bridge deck cruiser, suitable for Florida use, 32"×2"×2" built 1923. New motor, self-starter, electric light, running water, two toilets, galley, ice-box, clothes closets. Fully found. Price, \$2,800,00. Address Box 169, MoToR BoatinG.

Advertising Index will be found on page 158

5

Is it worth while buying a rebuilt marine engine? Does it really save you as much as the rebuilders say? Our answer is a decided "Yes." We will sell you an honestly rebuilt motor, embodying all the quality, reliability and desirable qualities of the new machine, at a fraction of the original price. All sizes, types and makes, continuously in stock, and our guarantee is a real protection for you.

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No. 566—Runabout hull built 1923, used two seasons, in perfect condition and guaranteed by us. Suitable for the installation of any power plant. With Liberty or similar power speed in excess of 40 M.P.H. can be obtained. Mahogany hull finished bright with forward and after cockpits. Price, \$1,000.00. No offers. For further particulars apply R. M. HADDOCK, Naval Architect and Yacht Broker, 50 East 42nd Street, New York City.



For Sale—Fast sedan sea sled, two 100 H.P. Sturtevant motors speed up to 38 M.P.H. Built of mahogany and finished bright. Fast and seaworthy. Exceptional opportunity for anyone desiring this type of cruiser. For further particulars apply R. M. HADDOCK, Naval Architect and Yacht Broker, 50 East 42nd Street, New York City.

### USED MARINE ENGINES

NAME	H.P.	CYL.	CYC.	PRICE	REMARKS
Buffalo	16-20	4	4 1	\$650.00	With Electric Starter and Gear-Like new
Caille		2	2	90.00	Five speed twin
Elto	3	3	1		Outboard Motor
C-139-	2	2		90.00	Outpoard Motor
Caille	3	2	2	90.00	Liberty drive twin, new
Evenrude	2	2	2	45.00	Single cylinder
Gray	2 34	1	2	35,00	
Caille	3	1	2	35.00	Outboard , magneto Ignition
Caille	T	1	2	65.00	Equipped with Wico
Barber		1	2	65.00	Slightly used
Sagamore	1.0	2	2		SHRIKIY BIOG
Sugamore	1.0	1	-	48.00	
De-Moore			3	45.00	
Palmer	16	4	4	150.00	No Beverse Gear
Jenrick	20	4	4	60.00	No Reverse Gear, Bronze Base
Fulton	8	2	2	65.00	Equipped with Wice
Knox	8	2	2	95.00	Reverse Gear in Ex. Base
Essex	10	2	2	120.00	Beverse Gear
Tables	0.0	3	3		
Lathrop				250.00	Paragon Reverse Gear
Palmer	4	1	2	40.00	Make and Break Igni.
Palmer	4	1	2	40.00	Jump Spark Ignition
Buffalo	16-18	4	4	325,00	Paragon Reverse Gear in Ex. Base, Base Rebuilt
Stanley	10	2		65.00	With Reverse Gear
Hartford	14.90	2	2 2	60.00	AARTH TREADERS CLAME
Chardend	14.20	Ä	ā	210.00	High Speed Type
Standard		*			Beverse Gear
Buffalo		4	4	250.00	Heavy Duty Reverse Gear
Kahlenberg	8	2	2	75.00	Reversible Engine, one way Clutch
Lathrop	16	2	2	125,00	
Dalman	9.16	0	2	35.00	Make and Break Igni
Palmer Palmer	2 17	2	2	35.00	Jump Spark Ignition
Paimer	2 78	8	4	250.00	
Friable	20		1		Joes Reverse Gear
Buffalo	3.6	4	4	50,00	
Pearl		4	4	280.00	Medium Duty Reverse Gear
Palmer	10-12	2	4	140.00	Jump Spark
Caille	9	ī	2	40.00	Inboard Motor, rebuilt
Carlson	90	4	4	50.00	
Paragon Revers	Coar			Rebuilt	
Paragon Bevers	e Gear	CHINE O	40.00	Rebuilt	
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					pellers on hand at very

All engines are F. O. B. Boston and subject to prior sale. Write or telephone or telegraph for further details.

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Gasoline and Oil Engines

TACHOMETERS—For registering speed of engine. Jones Type, Range 300 to 3,000. 18" flexble shaft and drive coupling. Cut price, write for particulars. SERVICE PRODUCTS CO., NOT INC., Springfield, Ohio.

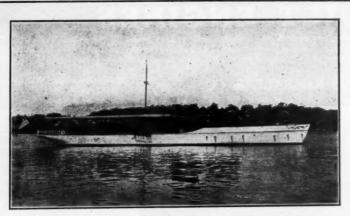
Pair Sterling Dolphins, 8 cylinder, 300 H.P., high speed, complete, electric starter, generator, triple ignition, etc. Will sell singly or pair. BRUNS KIMBALL & CO., 50 West 17th Street, New York City.

Pair 300 H.P. Fiata, very late motors—Garwood conversion, completely equipped—will sell singly or pair—Real value. BRUNS KIMBALL & CO., 50 West 17th Street. New York City.

Will sell four cylinder F. H. Sterling engine, 5% by 6¼ inches, in first class condition, Bosch dual magneto with impulse coupling and A K ignition, starter and generator, engine suitable for large cruiser or work boat, will handle 24 inch wheel, 800 r.p.m. W. E. GIBB, 41 West 56th Street, New York, N. Y.

FOR SALE—30-foot runabout. Good condition, automobile control. 4-cylinder, 18 to 25 H.P. Sterling engine. Bosch magneto. Engine recently rebuilt. Price reasonable. J. Walter Galloway, M-106 Delaware Trust Building. Wilmington, Delaware.

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No. 1230—FOR SALE—Fast, twin-screw cruising motor yacht; 103x14.7x4 ft. Speed up to 18 miles; two 6 cyl. Speedway motors. Dining saloon in deckhouse forward; two staterooms, main saloon and two toilet rooms (one with shower bath) aft. Handsomely finished. Considerable sum spent recently for thorough overhaul. Electric lights (independent plant). Construction of highest class. Only available as owner has purchased larger motor yacht through us. Very reasonable figure accepted for prompt sale. For plan, etc., address COX & STEVENS, 25 Broadway, New York. Telephone 2700 Whitehall.

Three light high speed motors—all rebuilt and guaranteed with complete equipment:
17-25 H.P. Sterling, 4 cylinder, 34x25,
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50 H.P. Sterling, 4 cylinder, 49x57,
Good engines, honestly rebuilt at substantial savings. BRUNS KIMBALL & CO., 50 West
17th Street, New York City.

WANTED—Two used 4 or 6 cylinder marine gasoline engines, 175 or 200 H.P., with electric starter. OMEGA MACHINERY, St. Hyacinthe, Canada.

For Sale—Fast 36' semi day cruiser Fidget, 60 H.P. Palmer motor. Speed up to 16 M.P.H. Sleep two. Built 1920. Very racy lines. Price, \$1625.00 cash. For further particulars, etc., apply R. M. HADDOCK, 50 East 42nd Street, New York City.

225 H.P. Dolphin, 6 cylinder Sterling, complete equipment, including latest Northeast triple ignition, rebuilt and guaranteed—attractively priced. BRUNS KIMBALL & CO., 50 West 17th Street, New York City.

150-180 H.P. Sterling, 8 cylinder, high speed, 55/2604, completely equipped—a genuine bargain at a price that will surprise you. BRUNS KIMBALL & CO., 50 West 17th Street, New York City.

FOR SALE—30'x7'8"x2'5" glass cabin cruiser—electric lighth, ice box, toilet, cushions, life preservers, ropes, anchors. 1923 SO H.P. Kermath engine, double ignition, self starter, generator, battery. Boat and engine in first class condition. Inquire BERNETTA S. WYCKOFF, 354 Seaview Avenue, Bridgeport, Conn.

If interested in boats, engines and equipment write A. M. DEERING, Monadnock Building, Chicago, Illinois.

FOR SALE—High speed, light weight, three cylinder Pierce-Budd motor. In very good condition and at an exceptionally reasonable price. KENNETH CARTER, 107 Third Street, Jackson, Michigan.

35-44 H.P. Speedway, 4 cylinder, 4 cycle, Model Z, 4½x5½, complete with starter and generator, built in reverse gear, etc., complete—Bargain, J. S. LOBENTHAL, 561 West 163rd Street, New York City.

FOR SALE—Red Wing Thorobred marine motor, model B, 32 horse, magneto—no gear. Perfect condition. \$200. Wm. E. Wetterlin, Diamond Bluff, Wis.

FOR SALE—Fifty-two-foot Bridge Deck Cruiser, new 1925. Special Hacker design, finest material and workmanship, flared bow, transon stern, large accommodations, 300 H.P. Sterling Dolphin engine, speed 18 miles, mahogany trim, two toilets, galley, Delcoilght. Just the boat for Florida. Details, 1426 Hibernia Bldg., New Orleans, La. Lake Arthur Club.

Pair 400 H.P. Model J 6 Murray & Tregurtha high speed, practically brand new, completely equipped—Wonderful buy. BRUNS KIMBALL & CO., 50 West 17th Street, New York City.

FOR SALE—Four-cylinder Missouri coal oil engine, 5½"x6", complete, with reverse gear and 24x24 Hyde R. H. wheel. In running condition. Price, \$325.00. John Carroll, Michael, Ill., Calhoun Co.

Will trade specially built Lincoln Berlin, costing approximately \$9,000.00, driven 4,000 miles, for cruiser—no junk. What have you? HARRY N. PETERSON, Harlingen, Texas.

STATEMENT of the Ownership, Management, Circulation, Etc., required by the Act of Congress of August 24, 1912, of MoToR BoatinG, published monthly at New York, N. Y., for October 1, 1925.

State of New York County of New York ss.

Before me, a Notary in and for the State and county aforesaid, personally appeared C. F. Chapman, who, having been duly sworn according to law, deposes and says that he is the Business Manager of the MoToR Boating, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printel on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business manager are: Publisher, International Magazine Company, Inc., 119 West 40th Street, New York City; Editor, C. F. Chapman, 119 West 40th Street, New York City, Business Manager, C. F. Chapman, 119 West 40th Street, New York City; Business Manager, C. F. Chapman, 119 West 40th Street, New York City.

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Oth Street, New York City.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other usincorporated concern, its name and address, swell as those of each individual member, must be given.) International Magazine Company, Inc., 119 West 40th Street, New York City; Star Holding Company, care of corporation Trust Co. of America, Wilmington, Del.; Sole Stockholder, W. R. Hearst, 137 Riverside Drive, New York City.

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4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holders as they appears upon the books of the company but also, in cases where the stockholder or security holders and trustee or in any other fiduciary relation, the name of the person or corporation for whom subtrustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other thas that of a bona fide owner; and this affiant has no reason to believe that any other person association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

C. E. CHAPMAN Business Manager.

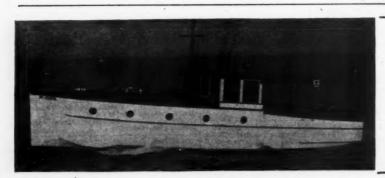
C. F. CHAPMAN, Business Manager. Sworn to and subscribed before me this 2th day of September, 1925.

[Seal] WILLIAM J. SPERL

Notary Public, Queen's County, No. 366. Certificate filed in New York County, No. 89; Reg. No. 7644. Commission expires March 3, 1927.

FOR SALE:-32-37 H.P. Standard Motor is perfect condition. E. von Hofe & Co., 92 Fultus Street, New York.

FOR SALE—Twin Screw Cruiser, perfect condition, 50'6" x 11' x 3'; speed 12 m.p.h. Excelled accommodations. E. C. GUION, 1612 Avenue E. Galveston, Texas.



No. 4291-FOR SALE-Raised deck cruiser, 36 x 10' x 3' draft, 50 H.P. W.S.M. motor; speed up to 12 M.P.H. One double stateroom and saloon with upper and lower berths; total sleeping accommodations six. One of the best cruisers of this size and type now available. Cruising- radius 360 miles at 10 knots. For further particulars consult R. M. HADDOCK, Naval Architect and Yacht Broker, 50 East 42nd Street, New York City.

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Supervision

### Yard and Shop

(Continued from page 46)

contest was conducted, and while it is now too late to submit further suggesnow too late to submit further sugges-tions, we hope later to be able to give you the details of the naming and the winner of the prize award. The maga-zine is of interest to all users of lubri-cating oil, in which it gives technical and interesting articles on the proper use of lubricants, both in the form of oils and greases. It would be well worth while for any interested readers to rewhile for any interested readers to request a copy of the book,

### MacMillan Used Johnson Motors for Expedition

Motors for Expedition

When Commander D. B. MacMillan, famous explorer, hoisted anchor in the harbor of Wiscasset, Maine, and set sail for the Polar region he had on board six Johnson Outboard Motors for use in propelling the smaller boats through the icy waters of the Arctic. Three of these lightweight twin cylinder motors were used by Geologists, assigned to the expedition by the National Geographic Society, Washington, D. C., for patrolling the seas in quest of scientific data of the northland. A Mullins steel boat will be propelled by two other motors of the same type for Walrus hunting. The remaining motor was used as a personal power plant by the famous explorer when making short cruises through the passageways of ice. cruises through the passageways of ice.

cruises through the passageways of ice. Both Arctic ships, the Peary and Bowdoin, carried Johnson outboard motors, they being the only type motor used on this expedition for propelling small craft. Careful study was necessary in selecting a motor that would stand the terrific hardships and cold weather of the north. The extremely light weight of the Johnson Motor was also a big factor in Commander MacMillan's selection, for cargo weight and space are very important considerations and space are very important considerations when outfitting an expedition of this kind.

### The Loew-Knight Six

An engine which has created consider

An engine which has created considerable interest recently is the Loew-Knight Six, built by the Loew Manufacturing Company, Cleveland, and is of the Silent Knight sliding sleeve valve type. The makers report a highly gratifying record of sales for this type of engine since they introduced it into the general marine field early this year.

The six-cylinder model is an exceptionally clean-cut and efficient marine power plant. The six-cylinders are cast en-bloc, separate from the crankcase, and because of the elimination of all ears for valves or valve cages provide a pleasing, symmetrical design. Removable cylinder heads are dome-shaped, insuring a perfect combustion chamber. suring a perfect combustion chamber. Crankshaft is drop-forged, has seven main bearings, and is drilled for oil leads to all bearings. Connecting rods are drop-forgings, I-beam section; oil tubes carry lubricant from the crank pin bearings to the piston pins, under pressure.

ings to the piston pins, under pressure. Pistons are aluminum; each piston is fitted with three rings, the bottom ring being an oil scraper which returns oil through the piston wall to the crankcase. An eccentric shaft, seated in seven bearings, operates the sleeve valves by means of small connecting rods. One single strand of link belt silent chain operates the eccentric shaft, generator shaft, and magneto shaft.

shaft, and magneto shaft.

Lubrication is furnished by a dry sump
system. Two pumps are used; one pump

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draws the oil from the engine base and draws the oil from the engine base and through filter to the oil reservoir mounted on forward end of engine; the other pump forces the oil to the bearings under pressure of 50 pounds. An oil cooler in the reservoir consists of a series of tubes, through which the cooling water is circulated before entering the cylinder is circulated. der jackets.

Reverse gear is of the planetary, ball-bearing type. Thrust bearing consists of a double row of annular ball bearings, which absorb thrust in both directions, and also relieve crankshaft of all thrust.

Intake manifold is provided with hot spot, and exhaust manifold is completely water-jacketed.

The engine complete weighs 1,260 pounds and is equipped with Robert Bosch dual magneto, Schebler carbureter, positive rotary type water pump, and 12-volt starting and lighting system, either Robert Bosch or Leece-Neville.

### Economical Cruising

Four men recently made an interesting cruise in the 32-foot cruiser Naiad of the South Shore Power Boat Club, Chicago. The boat is owned by E. G. Daniels and a vacation trip of 740 miles was made from Chicago, along the east shore of Lake Michigan, thence along the harbors and summer resorts of the east shore to Mackinac Island. On the return trip the course followed was along the east shore of Green Bay, through the the cast shore of Green Bay, through the Sturgeon Bay Canal, and thence along the west shore of Lake Michigan back to Chicago. In all, some 740 odd miles were covered, with several non-stop runs of more than eleven hours. The longest continuous run was 15 hours and 40 mincontinuous run was 15 hours and 40 minutes. Throughout the entire trip the wonderful and faultless performance of the little 32 h.p. Red Wing Thorobred engine was noteworthy. On several of the runs very rough weather was encountered, but no anxiety was felt, because of the confidence in the engine. It (Continued on page 62)

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# If You Must Know Rotational Speed Accurately

PAR more accurate than any device so far developed for maritime, commercial, or railroad use, Weston Model 44 is in the long run the surest. The Weston Speed Indicator consists of two units—a Magneto (driven from the moving part by gear, belt, or pulley) which generates a voltage directly proportional to its driven speed, and a voltmeter calibrated to read in Knots, Revolutions per Minute or Miles per Hour as desired.



Installation is simple; there are no complicated moving parts; vibration does not affect it; the voltmeter upon which the result appears may be placed at any desired position about the boat.

The life of this equipment is exceptionally long; it requires only slight maintenance, and a few drops of oil about once a year.

Marine Engineers use a Weston Model 44 Speed Indicator Installation to give the accurate speed data in power plants ranging from the great trans-Atlantic liner to the stripped speed boat.

For further information address

Weston Electrical Instrument Corporation
28 Weston Avenue, Newark, N. J.



### The Boat-Inside

(Continued from page 27)

Class II cruisers, adds to the sense of completeness and homey comfort—if well chosen. The pictures should be landscapes or seascapes with deep perspective and little of interest in the immediate foreground. This type gives something of the same effect as the mirrors in pushing back the walls. The picture frame should be the same tone as the trim.

The floor covering is important in the color scheme of a cabin and a crowded, prominent pattern of carpet or linoleum can simply render all other measures ineffective. Carpet lends a cosy something to the cabin, although the coolness of linoleum is an item, especially in the daylight hours when the sun on the house raises the temperature inside. But let the floor be solid in color, not too dark or too light. The floor is necessarily uninteresting, so why overdress it? The two-tone mottled pattern is the only safe departure from the solid color, provided the tones are not in too marked contrast. The tile effect, even though subdued, is questionable. In large squares, it fits the truly spacious baronial hall of a mansion, and might be suitable for the grand salon on a cruising houseboat. But in a cabin of the ordinary pleasure cruiser, it suggests a bath-room. And it adds to the lines, cutting down the appearance of spaciousness. When it comes to upholstery—after visiting some handsome

When it comes to upholstery—after visiting some handsome cruisers recently refitted—one may despair of human intelligence and philosophize on Darwinism. The arboreal instinct is surely present in anyone who would choose cretonne with writhing patterns and curves of motion in twisted flowery tropical jungles with myriad glaring colors intertwined. Such designs are said to brighten up things inside. Perhaps they do. But green burlap would be more restful and satisfying, if economy was any factor in the choice. There are cretonnes of the finer qualities which make lovely upholstery. I have in mind a series of patterns in leaves in subdued green with here and there a tiny flower or suggestion of a stem—and no background to be filled in with another clashing color. This gives a tapestry effect, and there is nothing to smite the eyeball of the person entering the cabin. No dazzling feathered creatures of questionable zoological ancestry vying with one another for inspection which they do not rate.

they do not rate.

There is a place for bright cretomes on the cruiser, but mighty little in the cabin goes a long way. A single bright pillow, not too large—about 14 by 16—without ruffle or border unless it be a cord and tassel matching color and tone of the cushions, is sufficient. Placed on one end of a bunk, it furnishes the necessary bright spot for the cabin of ordinary proportions. Another on the other bunk—preferably at the other end, is all that good taste allows. If other pillows are desired—and pillows do add an appearance of luxuriousness—let them be in the material of the cushions and plainly made. One pillow balanced by a folded steamer rug on the other bunk is the best combination, especially if the rug tones in with the upholstery, which can be easily accomplished because of the wide variety of color effects now used in such rugs.

Cretonnes of bright hue, especially in green, with, say, tan background, are ideal for the cushions in the wicker or steamer chairs on deck or in the cockpit. And if the deck is covered with neat green battleship linoleum the effect is most harmonious, cool to look at, and restful to the eyes. It must be remembered that if there is much red in those patterns it takes just that much away from the inviting appearance of chairs and cushions, for it is a hot color.

cushions, for it is a hot color.

In many cruisers today one sees figured denim used for upholstery, and, unfortunately, the prevailing choices are blue and brown. A tiny check of black pin stripe offsets the solid color and adds something. But experience will show that these colors tend to fade all too quickly. More expensive denims come in more delicate colors, as mauve, taupe, etc., also with the same little check and a small, invisible pattern in addition. This is really most serviceable stuff and will retain its original appearance for a remarkably long time. And being less common in shade, it gives an air of originality and elegance, besides making possible some harmonious cabin color schemes. Velour, however, is surely the most elegant material for cushions and bunks in the cabins. And it now comes in such a wide variety of shades and tones that any color scheme, however delicate, can be carried out.

can be carried out.

To vary the scheme of decoration in the different cabins or staterooms, creates new interest in the interior. A cabin painted pearl grey throughout with trim only a shade darker makes a most attractive scheme, especially for a boudoir. The cushions should be of a delicate shade of grey, preferably velour without pattern. The pattern in any material used in this color scheme should be confined to narrow, invisible stripes, small lines or checks, or pin stripes of dark shade, none of which should be numerous enough to destroy the tone of the whole. A tiny

(Continued on page 66)

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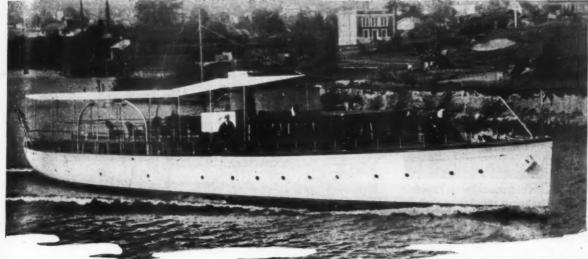
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# Performance Facts

# Winifred II, 98 ft. Lawley-built yacht, owned by Gübert Skinner, Seattle, Wash. Speed 14.6 miles with a pair of HSR six cylinder Hall-Scott Super Marine Engines.

# that Speak Volumes

WINIFRED II was recently repowered with two 100 H.P. Hall-Scott Super-Reduction Gear Marine Engines; the former power was a pair of 150 H.P. heavy duty engines. Here are the results:

1. Speed of 14.6 M.P.H. was attained; former speed 11 miles.

2. Boat control equal to four-wheel brakes on an automobile, for both stopping and reversing.

3. Total fuel consumption only three gallons per mile.

4. Only one pint of lubricating oil used in a run of 50 miles.

5. A remarkable ease in handling and quick acceleration.

6. A very compact and roomy engine room.

7. A motor installation of beauty, quiet running and free from vibration.

These Hall-Scott Reduction Gear Engines obtain remarkable boat performance because the full power output developed by the motor at high revolutions is delivered to the propeller at slower speed through the <u>silent</u> reduction gear. With increased torque at slow speed, it is possible to use a larger wheel with proper pitch ratio, giving greater propeller efficiency. The sliding type of gear gives a positive neutral and easy shifting for forward and reverse speed.

Both the reduction gear case and the lower crankcase are water-cooled. An efficient oil filter

increases the life of the lubricating oil threefold.

Therefore, if you want performance in your cruiser that can be equalled in no other way than by a great increase in horsepower, larger fuel storage capacity, and a cumbersome, smelly heavy duty engine—

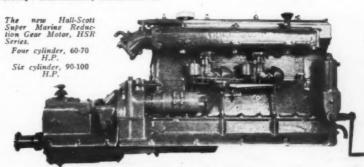
Let us give you some vital facts of real engine performance

### HALL-SCOTT MOTOR CAR CO.

Eastern Branch:
461 EIGHTH AVENUE at 33RD STREET, NEW YORK, N. Y.
Factory: BERKELEY, CALIFORNIA

### COMPLETE LINE OF HALL-SCOTT MARINE ENGINES

HSM-4—56-76 H.P. 1200-1800 R.P.M., 1290 lbs.
HSM-6—75-100 H.P. 1200-1800 R.P.M., 1590 lbs.
HSR-4—68-76 H.P. 600 or 900 R.P.M., 1750 lbs.
HSR-6—96-100 H.P. 600 or 900 R.P.M., 2200 lbs.
LM-4—125 H.P. 1700 R.P.M., 1200 lbs.



# In the tropical Zone of Florida

### THE "WONDER CITY" OF AMERICA

29 years old, and growing faster each year, with ever increasing popularity.

### There's a Reason-

CLIMATE: "Yes. It is ideal."
BEAUTY: "Yes. It is enchanting."
OUTDOOR SPORTS: "Yes. World's greatest variety."
BUSINESS: "Yes. Opportunities in every BUSINESS: "Yes. Opportunities in branch of business."

branch of business."

AGRICULTURE: "Yes. Our back country affords many diversified crops which pay well."

STABILITY: "Yes, and the same is amply proven by the investment and improvements being carried on by the Big Men and the Big Companies of the country."

Florida Bast Coast By. espending for improvements.

Drovenents

Cityde Steamship Co., new ships for Miamt
service

Florida Esectric Light & Power Company
(a substidiary of General Electric Co.)

Sabboard Attrine Balleway extending to

Bell Telephone Company, extensions. 3,000,000

New Dutificing to the Misant sone, 1925 102,000,000

New Deservice Company, extensions. 3,000,000,000

New Courthouse and City Hall. 2,500,000

Street and Sewer Construction. 2,500,000

New Causeways and Bridges. 1,000,000

New Causeways and Bridges. 2,000,000

Expending on Realty Developments within ten miles of Miaml. 300,000,000

Investment of the United Cigar Stores Co.

County and State Road Departments expending on Ditic Righway. 2,000,000

City of Miami on Fark improvements. 2,000,000

City of Miami on Harbor Improvements

City of Miami on Harbor Improvements 5,000,000

Total 3474,405,000

Transportation facilities being greatly increased.
Florida Bast Coast Railway being double tracked.
Florida Bast Coast Railway being double tracked.
Bashoard Alriles Bailway being estended to Miami.
Clyde Steamship Company coperating three fine ships from New York direct to Miami-B days as week.
The Bailtimore and Carolina Steamships from Bailtimore and Carolina Steamships from Bailtimore Rhe Merchanta and Miners "Berkshire" direct from Philadelphia to Miami.
The Admiral Line operating the steamship "H. F. Also service to the Bahama Islands by a number of ship lines.

Does the above look like a "Bubble" f
Bank Deposits, November 1st, 1924... \$27,000,000
Bank Deposits, November 1st, 1925...\$210.000,000
Gain, 570 percent.

Does that look like a "Bubble"?

We expect to entertain 300,000 visitors this winter.

We invite YOU be one of this number. We'll do to best to give you good accommodations and also to the state of th

### MIAMI CHAMBER OF COMMERCE



### Yard and Shop

(Continued from page 59)

never gave a moment's trouble, and all that was necessary was to press the starter button and to see that the oil and fuel supply was kept up. A very careful record was kept of the mileage, speed and fuel consumption, and it was found that exactly three gallons of gasoline were used per hour, which, on a 34-throttle, provided a cruising speed of 9 miles. If necessary an additional mile and a half was still available, but there was no occasion to call on the motor to do more than necessary.

### A New Outboard Motor

Preliminary announcement has just been made by the Lockwood-Ash Motor Company of Jackson, Michigan, that the well known L-A Twin Rowboat Motor has been re-designed and now shows an increase of somewhere near 30 per-cent in power over the 1925 model, without any increase in piston displacement or in weight. It is said that there are several new and novel features in the new model, which give it a rather startling performance.
The 1925 model established its power

and speed, by winning the first prizes in Class B boat races, in Detroit, in August, and at Put-In-Bay, Ohio, in

The new motor has been materially improved, and full announcement will appear at an early date.

### Marine Exhibit in New York

An elaborate display of heavy ma-chinery was exhibited at the marine show held in New York during November. Of particular interest were a number of the actual machines and fittings which are to be built into the yacht tings which are to be built into the yacht Aloha, during her conversion from steam to Diesel electric drive. There were, for example, the large main propulsion motor, and the elaborate switchboard for it, manufactured by the Westinghouse Electric and Manufacturing Company. One of the big six cylinder Winton Diesel engines, of which there will be three, was also exhibited by the Winton Engine Company, and it was Winton Engine Company, and it was direct connected to the generator which it will drive. There will be three of these engines on the ship. Since the conversion will necessitate the use of electricity for all auxiliary machinery, the American Engineering company of Philadelphia, exhibited the electro hydraulic stearer and windlass built for this yacht. The windlass is driven by an electric motor, coupled directly to an hydraulic pump. a discharge from the Winton Engine Company, and it electric motor, coupled directly to an hydraulic pump, a discharge from the latter driving an hydraulic motor that drives the windlass. By changing the stroke of the pump plungers, the discharge from the pump can be varied from zero to the maximum capacity of the pump. This varies the speed of the hydraulic motor and gives the windlass an infinite range of speeds from zero to a maximum.

The flexible control and wide range

The flexible control and wide range of speeds enables the windlass to exert tremendous power at slow speed when breaking out the anchor. There is no gear shifting and the fact that the electric motor operates at constant speed, regardless of the speed of the windlass or the load against which it is pulling eliminates all complicated. it is pulling, eliminates all complicated electrical controls and protective devices.

(Continued on page 64)



SOON AGAIN, may you travel away-southward for another or your first-in any or all of the famous East Coast re-sorts, those versatile dispensers of summertime attractions in the dead of winter.

There's historic St. Augustine, whose quaint cobbled streets straggle across wide boulevards. There's Ormond-on-the-Halfax with its auto racing on the beach. Palm Beach—tropically brilliant. long since reached the social grade. And Miami—that metropolis extraordinary—where real estate's an out-door sport.

And . . . oh, yes . . . there's golf, surf bathing, fishing, riding, motoring and every other diversion.

The Florida East Coast (Flagler System) Hotels, operated on the American plan, open as follows:

ST. AUGUSTINE Alcazar · · · · Dec. 19
Ponce de Leon · · · · Jan. 6 ORMOND-ON-THE-HALIFAX Ormond · · · · PALM BEACH Royal Poinciana - Dec. 24
Breakers - Rebuilding Royal Palm .... Dec. 15
KEY WEST
Casa Marina . . . . . Dec. 28

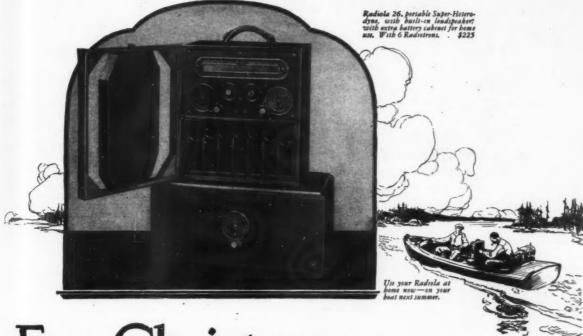
LONG KEY
Long Key Fishing Camp - Dec. 24 Through Pullman trains and through sleepers from important cities to all East Coast resorts, including Key West, via the wonderful Overseas Extension, for Havana, Cuba.

Booklet containing list of hotels and other information supplied upon request.

Florida East Coast Railway Co. Florida East Coast Hotel Co. (Flagler System

NEW YORK OFFICE 2 West 45th Street Phone Murray Hill 4411





# For Christmas— a PORTABLE Super-Heterodyne

Here is one Christmas buy that you'll enjoy right through the winter to the very day the ol' boat slides from its dry dock to the water. And then you'll just pick up your radio set—and carry it on board. It needs no antenna, and no installation—just turn the knob and tune in!

The Radiola Super-Heterodyne needs no "claims" to make it known. It is famous from coast to coast for what it does. And it is the famous "Super-Het" which is neatly fitted into this portable cabinet of fine walnut—with the loop in the cover, loudspeaker built-in, and room inside for dry batteries. Just hear it—and you will know that it is as fine a radio set as you can want for your home—and the most practical set for the distant places, out-o'-doors.

RADIO CORPORATION OF AMERICA NEW YORK CHICAGO SAN FRANCISCO

# RCA-Radiola

MADE BY THE MAKERS OF RADIOTRONS



# Yard and Shop

(Continued from page 62)

### A Removal Notice

We are advised that the New York branch office of Palmer Brothers Engines, Inc., will be located at 89 Third Avenue, near Twelfth street, after December 1. A complete stock of parts, engines, and accessories, for the many Palmer models, will be carried in this new display room, and visitors to New York are requested to stop in and inspect the engines.

### Standard Engine Bed Recommendations

The motor boat division of the Society of Automotive Engineers has submitted a recommendation for standard practice for bed timbers for all boat construction, and adapted to engines of 75 cubic inches or less per cylinder. The recommendations are that the engine bearers be 16 inches between their faces, and that their thickness be



This smart little cruiser was built by Allan W. Fulton of Earleigh Heights, Md., from the design which appeared in the February issue of MoToR BoatinG. This boat has been powered with a Brennan E4 engine, and drives a three blade 17 by 16 Hyde wheel, at 1,250 r.p.m. She is a wonderful sea boat, and handles well

not less than 1 3/4 inches. The top of the timbers is to be one inch below the center line of the crankshaft, and the minimum length of engine foundations should be at least 48 inches. Since there are many engines which would not rest correctly on a foundation as dimensioned, suitable blocks should be fitted on the inner faces to accommodate varying engines. This procedure will provide a uniformity in this detail, which has been lacking for a long time.

### A House Boat Cruiser

Dr. J. F. Detweiler of Biloxi uses the large 45 foot cruiser illustrated for pleasure cruising on the waters of the Gulf, and the rivers in the vicinity of Biloxi, Miss., as well as for hunting and fishing. The boat is arranged with ample galley equipment, with an ice box of 400 pounds capacity. A household type range burns coal, wood, or charcoal, and an automatic electric lighting outfit furnishes power for light, cooking, and fans. The power plant is a four cylinder, 36 h.p. Regal engine, which has an abundance of power to drive the boat about.

### A New Stock Runabout

The Motor Boat Shop conducted by Fitzgerald and Lee of Alexandria Bay, New York, has completed a new 20 foot V-bottom runabout, designed particularly for the needs of the Thousand Islands Territory. The boat is equipped with a model 251, six cylinder, Continental Van Blerck engine, which drives it smoothly and fast. The Motor Boat Shop has been appointed the official distributor in the Thousand Island territory for the Continental Van Blerck engines, and the care free operation of these engines should make them popular in this territory also.

### A. J. Maddox Joins Gray Motors

A recent announcement was made of the connection with the Gray Marine Motor Company of Detroit of A. J. Maddox, Ontario, Canada, in the position of Sales Manager. He has already entered upon the duties of his new position, and it is quite certain that the Gray Marine Company will prosper under his direction.

### A Gasoline Engine Encyclopedia

A new gas engine hand book has just appeared in the fourteenth edition of Dyke's Automobile and Gasoline Engine Encyclopedia, edited by A. L. Dyke of St. Louis, a pioneer in the automobile field, and published by Goodheart-Willcox Co., Inc., of Chicago. This is the first revision of this world-famed book since 1922. The fourteenth edition looks

This book, while it has been designed for the particular benefit of the automobile user, is at the same time, a most valuable work for any gas engine users, such as are found in all motor boats. The operating theory methods of carburation is all closely are all closely similar. tion, ignition, lubricating, and cooling, are all closely similar, and the explanations and instructions given, apply to all gas engines.

There were 512 of the pages changed and 221 illustrations either changed or new ones added. There are now a total of over 4,200 illustrations and 1,249 pages in all. The index has been enlarged, with about 1,200 lines added. There are now over 15,000 lines to the index.

There are four colored charts used in connection with the trouble-shooting matter, one being that of a complete igni-tion system. This chart pictures the entire electrical circuit tion system. This chart pictures the entire electrical circuit (internally), from the storage battery to the ammeter, thence to the ignition coil winding, to the interrupter, and thence to the spark plug. On this chart there are 66 troubles numbered and treated that could occur, and in addition to definition to the test and the remedy are given. There are two major tests, the test, and the remedy are given. There are two major tests, clearly pictured in colors, which are made first. These major tests will determine if the trouble is in the spark plugs, or in the ignition system. Another colored chart is that of the generator and its circuits, including, the cut-out, and another of the starting motor and its circuits, each treated in the same manner as the

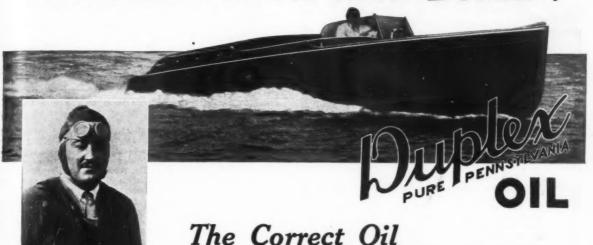


A commercial craft owned by S. M. Gomez of Belize, Brit-ish Honduras, which operates along the Belize River. E. J. Willis of New York has supplied them with Hyde propellers and other fittings, with which they are greatly pleased

ignition chart and the fuel-feed chart. A feature of these charts is the colors and also the fact that the troubles are classified into mechanical and electrical troubles.

Some of the new major subjects in this trouble-chart section of the book are Ignition, Fuel-feed, Carburetion, Generator, Battery, Cut-out and Starting Motor Troubles; some of the new minor subjects treated are: Relation between ignition and carburetion; Relation of spark, mixture, and compression; Factors which help produce a combustible mixture; Why more gasoline must be used to start with on a cold day; Causes of back-firing in carburetor; Methods to reduce excessive fuel consumption; Ignition interrupter troubles; Pointers on adjusting interrupters; Causes of engine failing to start; Causes of engine not idling properly; Names of parts and the troubles that could occur in the generator and its circuits; Generator troubles and tests, electrical and mechanical; Dash ammeter troubles; Storage-battery troubles; Starting-motor troubles and tests, etc. Some of the new major subjects in this trouble-chart section

# ANOTHER WINNER WITH DUPLEX!



William J. Connors, Jr. Owner and Driver of Miss Palm Beach

Flashing first across the finish line in both the fifty and hundred mile races of the Buffalo Launch Club's Regatta, Miss Palm Beach out-distanced all her rivals because her Gar Wood engine was perfectly lubricated every lap of the way.

"Engine performance perfect and Duplex Marine Engine Oil stood up splendidly throughout the hundred and fifty miles of high speed running," wired Gar Wood, Inc. "Oil was in splendid condition at finish. As previously advised, we are recommending Duplex Marine Engine Oil to all users of Gar Wood Engines, both Liberty and Fiat Types."

# for Marine Use Duplex Marine Engine Oil wrote new chapters in marine engine

Duplex Marine Engine Oil wrote new chapters in marine engine lubrication when Miss Palm Beach captured both the fifty and hundred mile events at the Buffalo Launch Club's Regatta and Commodore H. B. Greening set up a new 24 hour world's record with Rainbow IV in Muskoka.

A new standard of marine engine performance was demonstrated by both Miss Palm Beach and Rainbow IV because the power plants of both boats were able to function at full capacity from start to finish. In Duplex Marine Engine Oil they at last had a lubricant that kept its body and viscosity despite the highest engine heats, an oil that steadily resisted dilution, maintained compression, and prevented burned bearings or seized pistons.

Duplex Marine Engine Oil has been developed to meet the exacting problems presented by marine engine lubrication. It is not a renamed automobile oil, although it is a companion product to the Duplex Oil that has been serving Pierce-Arrow distributors and owners for 25 years and like that oil, is produced from 100% Pure Pennsylvania Crude—the source of the world's finest lubricants.

There's a real thrill in reading about Commodore Greening's great run with Rainbow IV—write today for a copy of the complete story.

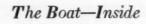
### Stop That Pump Leak with KASSON Waterproof Grease

Don't fuss around any more with a leaky water pump. Get a can of Kasson—the only waterproof grease ever made—and use it in the water pump grease cups. Then you will have a lubricant that can not be washed away from the bearings, a lubricant that is not going to be taken up by the water stream and deposited inside the water jackets to clot and clog the passages of the cooling system. Send for a pound can of Kasson today. Enclose 50c. in stamps, money-order or check (60c. on Pacific Coast). C. O. D. shipments 12c. extra.

### ENTERPRISE OIL COMPANY, Inc.

164 Chandler Street BUFFALO, N. Y.





(Continued from page 60)

inconspicuous pattern is very practical, as it tends to hide any discoloration or stain.

Small grey draperies of the same tone as the trim about the portholes, over which white voile curtains are hung, completes the scheme. The lines of these draperies, however, are most important in effect. If too large, too long, or too heavy in appearance, the best effect is lost. The same principles apply to them as to those in the house back home, only more acutely. The eye can get the picture of the whole cabin at once, which or even tones in the whole. An enlargement of a head-on photograph of the boat, done in dull finish, with narrow, plain frame to match the trim, would be in keeping with the spirit of things. And there are all manner of marine scenes possible to fit into this interior.

Another color scheme for the boudoir may be made up in Another color scheme for the bouldoir may be made up in blue instead of grey. This is equally cool, delicate and attrac-tive. The success of this, as in all these interiors suggested, depends upon choice of upholstery. It must be different from the common, and, unfortunately, the more familiar shades. It is even better to have a suggestion of another color in it than

to have the heavy, ordinary ones.

to have the heavy, ordinary ones.

Ivory instead of pearl grey for the house walls, birch, redwood, walnut or brown mahogany, natural finish, in the trim, makes a neat and practical color scheme, less delicate than the grey and mor suited, perhaps, to male occupancy. A photograph of the boat itself lying at anchor, with tropical or woodland background, would be quite appropriate. An old print of a famous clipper ship, frigate or other romantic type of vessel of ancient days, would add interest. Or a picture of a Spanish galleon with its gilt trimmings reproduced, would be in keeping, if the trim were light. There are several Maxfield Parish pictures which possess the necessary deep perspective and the proper tones for this interior. But if such a brilliant picture is used, it is advisable to have the pillow in the material of the upholstery. The small cabin should have only one bright spot. The upholstery and draperies in this scheme may be in any of The upholstery and draperies in this scheme may be in any of several shades of brown above ordinary chocolate, care being taken to avoid tones with much suggestion of red in them. These never really look well and become ugly when wrinkled or a bit used.

Ecru and sage green also make a cool, summerish interior for cabin. But be sure to have a noticeable suggestion of grey in that green. Else the place will look like a bare trellis on a florist farm. Green is one color that plays strange pranks on the amateur mixer. Blue and yellow, its components, give very different results in varying proportions. Put in red lead to give the green paint the tinge of grey.

### A New Service

The firm of Bruns, Kimball & Co., with its characteristic progressiveness, is prepared to render new service to yachtsmen in the Eastern territory. For many years it was the custom of the engine dealer to sell their customer a new engine for his boat, allowing the purchaser to have it installed as best he could. In a great many cases the efficiency of the engine was impaired by a poor installation job on the part of the builder or mechanic installing it, and in many other cases also the yachtsman after purchasing an engine was at the mercy of some grasping builder, who attempted to get all he possibly could, regardless of value, for the installation.

The time has come when the sale of an engine and its installation should not be considered as two different operations.

The engine dealer should be just as much concerned with the proper installation of the motor as the purchaser, and following along these lines Bruns, Kimball & Co. are now prepared atong these lines brans, kindan & Co. are now prepared to carry out all of the details in connection with the repowering of a boat. Whether it be one of the ten thousand dollar Sterling Vikings or the hundred thirty-five dollar Kermath single cylinder, or any one of the enormous stock of rebuilt engines sold by this company the same service and follow-up accompanies each sale.

Bruns, Kimball & Company's engineers, at no extra cost to Bruns, Kimball & Company's engineers, at no extra cost to the purchaser of one of their motors, assist with every detail accompanying the installation—engineering advice, complete lay-out, technical recommendations, advice on propellers, etc., and at the option of the customer the work may be done at any boat yard selected. This marks a new era in the engine industry and it means complete relief from all of the thousand and one details that usually bother the weakterness and are and one details that usually bother the yachtsman and are contingent upon a new installation.



SET a course from any point on the Atlantic seaboard for Jacksonville—and then into the famous St. Johns River, the Nile of America—for one hundred and ninety-eight miles of subtropical scenery-to this warm welcome haven for winter water-sportsmen on beautiful Lake Monroe. To a magnificent yacht basin and important inland port.

On land-every sport and civic feature. New lakefront tourist hotel. Golf. Band concerts. Sound, substantial investments. Good highways and railroad service.

> For information and booklet, address

SANFORD CHAMBER OF COMMERCE

# Du Brie The World's Flexible Motor

All Parts Interchangeable with Ford Parts

DuBris gives the utmost in marine engine value. While engines wear out after a few years of service, the DuBrie s running on as good as the day it was bought. Has spebot spot manifold. Shipped complete ready to install and No extras to buy. Write today.

### DU BRIE MARINE MOTORS

McGRAW AVENUE

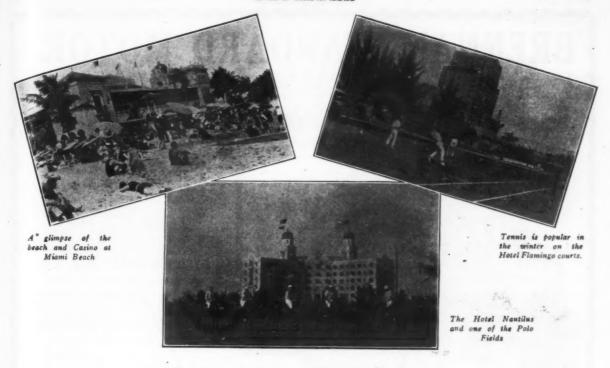
DETROIT, MICH.

Louisiana Distributors Stauffer, Eshler n & Co., New Orleans, La.

Disappearing Propeller Boats at Reduced Prices

A few of our Used and Shop-worn Bargains 

DISAPPEARING PROPELLER BOAT COMPANY
PENN YAN, N. Y.



# MIAMI BEACH

## Queen of All Florida Resorts

PLAN to visit Miami Beach this winter—it's the best time of the year. Outdoor sports are at their height: boating, fishing, golf, tennis, skating, motoring, polo and other summer pastimes. Here you will meet visitors from many lands, all enjoying the gayety and diversity of entertainment and recreation that only Miami Beach can furnish in such abundant measure. You will relish its unrivaled facilities for rest, too. The hotel accommodations are irreproachable. You should make your reservations now.

### THE CARL G. FISHER HOTELS

Nautilus — Flamingo — Lincoln — King Cole

In March the great speed boat races are held at Miami Beach. Contests for the Fisher-Allison Trophy, the Dodge Memorial Trophy and others. MIAMI BEACH, FLORIDA

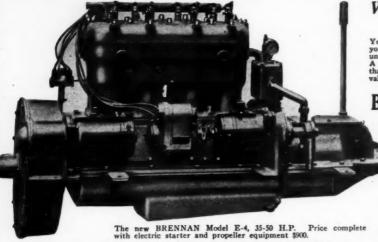


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# **BRENNAN STANDARD MOTORS**

PART for part you will find greater value in BRENNAN Standard Marine Motors. Each part has extreme rugged strength giving it lasting qualities of far more life than the average marine motor requires. Take the new BRENNAN Model E-4, for example. It is a very staunchly constructed motor, light in weight for its conservative rating of 35-50 H.P.

This motor has set a new high standard in marine power plant construction. Nothing in quality or strength is left to be desired. In design the E-4 is a very compact and accessible engine. Two large inspection plates are provided on each side of the base. The manifold construction is something entirely new. Then there is a new design removable head. The flywheel is entirely enclosed. Let us send you the complete details of this new motor.



Also other models in four and six cylinder types ranging from 15 to 100 H. P.

Write BRENNAN
Before You Buy

You should not decide on the power plant for your new boat or repower your present boat until you learn more about the BRENNAN. A fair comparison will prove to you the fact that the BRENNAN represents the greatest value on the market.

Brennan Motor Mfg. Co.

500 E. Water St., Syracuse, N. Y.

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Send me your new sales plan.

Send me your new sales plan.

My requirements are.....

my requirements are.....

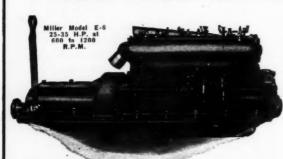
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### Miller Motors Are Good Motors for Any Boat



Sound in Construction-

Reasonable in Price

TIME alone discloses the full value of the Miller motor. It tells the story of the inherent lasting qualities of the Miller.

There are eleven Miller models ranging from 4 to 50 H.P. You owe it to yourself to investigate the Miller, a product of twenty years' experience in building marine engines of the better class.

Write today for catalog.

MILLERS MOTOR CORPORATION

2333 North Talman St., Chicago, Illinois

### Do You Want to Sell Your Boat or Engine?

MoToR BoatinG's Market Place will put you in touch with a buyer. (See advertising rates on page 57.)



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FORD MOTOR-MARINE ROUIPPED

DAIL S. GESSWEIN BOAT CO.
BERGEN BEACH



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PAINT AND VARNISH MAKERS SINCE 1889

Top and Bottom Paints for Everything that Floats

"NEW JERSEY" COPPER PAINTS are made to resist teredos and marine growth, and they produce a finish that will increase the speed of your boat.

"NEW JERSEY" YACHT WHITE has been specified and used on the largest and finest yachts afloat. Retains its whiteness and will stand scrubbing.

"NEW JERSEY" SPAR VARNISH will stand up under all kinds of weather conditions, hold its lustre and give absolute satisfaction.

SOLD BY ALL LEADING DEALERS-OR WRITE DIRECT TO US.

Write for booklet—"Davy Jones' Locker" giving valuable information on painting; sent without cost to you.

### NEW JERSEY PAINT WORKS

Harry Louderbough, Inc.

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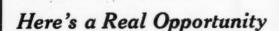
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### Commodore Greening to Race

(Continued from page 24)

British International Trophy are none too bright. It is true that there was a tentative challenge received last winter from France for a race, to be held last Summer at Detroit but the challenger failed to materialize, even though three American boats were built to defend the trophy. This necessitated calling off the race and the defending boats had no chance to demonstrate their capabilities. As for a challenge being received for a 1926 race for this trophy, it is very doubtful.

It appears that the only solution of international racing is for the Americans to adopt classes for their racing which have been approved in foreign countries for sometime, and then build boats to these classes, with the hope that some foreign challenger will desire to match the best boat in his country against the American craft. The foreign classes all specify a much smaller piston displacement than any of the popular classes in American. At the recent meeting of the American Power Boat Association the 1½ liter class was adopted by this Association. The requirements of this class coincide in all particulars to the 1½ liter class in England and several European countries.

Commodore Harry B. Greening of Hamilton, Ontario, Canada is a firm believer that in order to re-establish international competition, it will be necessary for one or more boats meeting the requirements of one of the European classes, to be sent abroad to win one of their permanent trophies. With this in view, Commodore Greening has decided to challenge for the Duke of York trophy, and send a boat abroad to compete in British waters during the early summer of 1926.

sent abroad to win one of their permanent trophies. With this in view, Commodore Greening has decided to challenge for the Duke of York trophy, and send a boat abroad to compete in British waters during the early summer of 1926. The race for the Duke of York trophy for which Commodore Greening is challenging will probably be held early in July on some sheltered waters of Great Britain. The races are run under the racing rules of the International Motor-Yachting Union. The length of the race course is between 30 and 40 nautical miles.

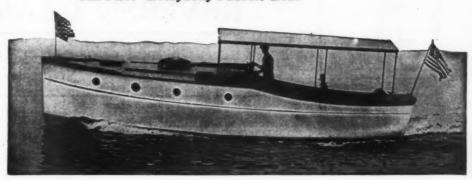
Commodore Greening is endeavoring to interest a number of American yachtsmen in the race for the Duke of York trophy next summer and it may be possible to take abroad a team of three boats to represent the United States and Canada.

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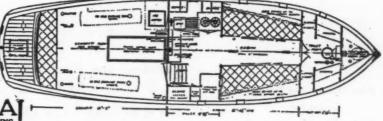


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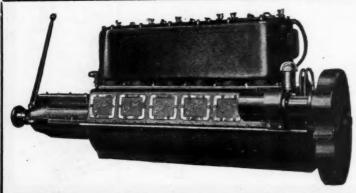
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History repeats itself. In the 1926 Florida season this new house boat will be the feature, as was Mr. Cadwalader's 85-ft. houseboat SEQUOIA the preceding year.

Not alone because of its 104 feet of trim yachting lines; its draft of 4 feet 3 inches, enabling it to go anywhere; or its slender appearance and 15-miles-an-hour speed, despite its 19-ft. beam, which assures comfort quarters for the owner and his guests.

In interior decoration it is the last word in houseboat luxury and beauty. Its large deck-house is finished in teak, inside and out, with handsome marine panels in main salon and dining-room, and is equipped with furniture of true period type. A remarkable view of the after-deck through the large double doors.

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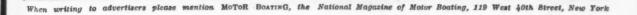
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### Navigation By Radio

(Continued from page 32)

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This location is then given to the ship's operator and in less than three minutes, the captain knows exactly where he is. In cases where the ship has been unable to get direct sights for several days and is proceeding by dead reckoning only, these radio compass bearings have proven invaluable. In instances where a heavy fog has settled down, the radio compass has more than once been the means of leading to a safe anchorage until such time as things cleared off. Many amusing tales are told of hard-boiled old sea captains who would have none of this new-fangled nonsense and have been forced to use it only as a last resort. The aston-ishing accuracy of such bearings has made more than one old sea-dog such a chronic user of them that the ship's operator has been handicapped in getting off the toll mes-

sages coming to and from passengers.

Compass bearings from shore make a tremendous amount work and in cases where five or six ships are all calling for bearings at the same time, the operators have had their hands full. In order to overcome this difficulty to a certain extent the government has erected shore radio beacons which

transmit a given signal on a given wave-length and for a ship equipped with the proper radio compass receiving set, sig-nals from two or more of these stations may be picked up and the location of the ship accurately charted.

These radio beacons are arranged to send out distinctive signals much after the manner in which each light-house has its own particular flashing interval. The transmitter consists of what is known as a continuous wave or C. W. set which is in operation twenty-four hours of the day. An ingenious electrical contact breaker is arranged in such a way that it automatically causes the transmitter to end out way that it automatically causes the transmitter to send out the pre-determined signal. These transmitters may be left unattended for long stretches at a time and may be depended upon to aid mariners under all weather conditions. Unlike the light-houses, fog, wind and rain have no effect on radio waves and they are fully as efficient during the heaviest storm as they are on a fine summer's day.

These shore compass stations operate on 1,000 meters which is, of course, far above the range of the average broadcast receiver. With a properly designed loop aerial and a receiver which will tune sufficiently high, there is no reason why motor yachts could not avail themselves of this service for no transmitting equipment is necessary. pick up the signal from two or more shore stations and plot them on your chart according to the bearings given by the

loop aerial.

Fairly good work may be done even with a broadcasting receiver provided it operates on a loop aerial. A good compass will have to be incorporated into the axis of the loop aerial so that the direction may be accurately plotted. If you know the exact location of a shore broadcasting station, there is no reason why a fairly accurate bearing could not be taken. It may not be quite as accurate as a bearing taken from the C. W. transmitter because the transmitted wave is not as sharp. However, suitable cross bearings may be taken from broadcasting stations for all ordinary work. By writing to the Superintendent of Documents, Government writing to the Superintendent of Documents, Government Printing Office, Washington, D. C., information regarding these radio compass stations may be secured. They are listed in a book entitled Commercial and Government Radio Stations, of the United States, edition of June 30, 1925. The price is fifteen

cents in coin only.

During the last visit of Senator Marconi to this country the writer had the opportunity to see him demonstrate before an engineering society, his new form of short wave beam

transmitter.

ansimitter.

The apparatus was set up on the stage, the receiver on the side and the transmitter on the other. The wave-length one side and the transmitter on the other. The wave-length used was well below five meters and the transmitting aerial consisted of a short length of brass rod, not over fifteen inches long. This was arranged vertically and on three sides surrounding it a wire frame work was arranged on a turn table. This frame work acted much like a reflector and sent that radio beam in such a straight line that when Marconi held another short length of brass rod in front of the beam, it was completely cut off and the receiving set became inactive. Swinging the reflector slightly from one side to the other also caused the signal to disappear unless the receiver was moved with it. one side and the transmitter on the other. receiver was moved with it.

This was all on a miniature scale but its application to marine work is at once apparent, and this is what Marconi has been working on since that time. Several such beacons have been erected along the shores of England, transmitting a powerful beam over a wide expanse of sea. These radio light houses may be either fixed, revolving or oscillating ac-

(Continued on page 82)

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### A. B. P. A. Holds Annual Meeting

(Continued from page 33)

the area of the cylinder, but the revolution rate and stroke did not appear in the rating formula as factors, which led to the general belief that they had not been considered. This was not entirely correct, however, since these factors had been taken into account, but were successfully cancelled It also seemed that the minimum waterline beam restriction was too generous, and suggestions were made for reducing this. The rule finally adopted does create a new minimum beam, but there are only a very few boats which will be affected by this rule. Provisions was made to waive the application of this feature from boats which are at present in existence, and apply it only to newer boats constructed after October 29, 1925.

after October 29, 1925.

Another important change took place in the method of determining the midship section. Under the old rule, it was permissible for the measurer to take this section at practically any suitable point on the boat. Under the new rule, he is required to take it at a fifty-five percent point, and in addition at two supplementary points, midway between the bow and stern waterline intersections, and the section taken amidships. The sum of these three sections, multiplied by 43, will now result in a new section area, which will be incorporated in the rating formula. The racing commission is still at work on an alternative formula, which will mission is still at work on an alternative formula, which will mission is still at work on an alternative formula, which will be included when the year book is printed, but which at the present time has not yet been studied sufficiently to permit of definite conclusions being drawn. Work on this is well underway, and will be completed in time for the book. This supplementary formula includes a horse power factor, which will be determined from each different engine manufacturer for his various machines, and the compilation of these statistics is proceeding favorably. The maximum horse power for each different make of engine, will be fixed by the Racing Commission, from the data submitted by the manufacturers, and in this way it is hoped to get a satisfactory result. In addition, provision has been made for the use of reduction addition, provision has been made for the use of reduction gears, in which case the horse power rating will be increased by twenty percent. In the case of twin screw and triple screw installations, the horse power rating will be considered as ten and twenty percent lower than the single

considered as ten and twenty personal considered as ten and twenty personal content of the content of the content of these rules. It is important, however, that all boats in any one contest be rated under one or the other of these rules. If, boats are rated under both rules, and allowed to take part in the same contest, the results will be a failure. Provision was made for increasing the ratings of the content of the conte ers, to bring their ratings more nearly in agreement with the

time allowance tables.

Several additional trophies were presented to the association, to be competed for under stipulated conditions. The first of these was a challenge cup for the development class. Commodore Otto F. Barthel of the Detroit Yacht Club presented the Deed of Gift for this trophy, and the first race will be arranged during next September, by the Detroit Yacht Club.

Another trophy was presented by Carl G. Fisher for an International 1 1/2 liter (91 1/2 cubic inches) class. This is a little engine, smaller than most present day marine engines. There are, however, a large number of powerful engines in this size which are used in automobile racing. No doubt these will be available, and should perform well. Commodore Greening is planning to build a boat or two for this class, and to go abroad in an attempt to capture the Duke of York's trophy for this class in England. This race will be early in the summer, and it is planned to hold a second race in New York during September, for which several of the English boats will come to America.

Still another trophy is a marvelous solid gold one, presented by Colonel E. H. R. Green, for competition with outboard motor boats. The first race for this will be held at Miami in March, and other races later in the season.

Commodore Greening also presented a trophy which is to There are, however, a large number of powerful engines in

Commodore Greening also presented a trophy which is to be awarded yearly as a prize for the best twenty-four hour endurance run. Commodore Greening in Rainbow IV has just completed a run of this kind, and is anxious to see an

attempt to duplicate or better his performance.

The amiable Commodore Schantz, who had been previously appointed chairman of the Nominating Committee, had in the mean time reported, and the entire ticket as suggested by his committee was then unanimously elected. The officers for 1926 will be President, Frederick R. Still, New York; Secretary, W. D. Edenburn, Detroit; Treasurer, Ira Hand, New York; Timer, A. J. Utz, New York; Measurer, E. V. Rippingille, Detroit; and Surveyor, F. W. Horenburger, New York.

At the close of the meeting, the gathering adjourned to the dinner tables, where a banquet without speeches was

enjoyed.

The revised racing rules, as they will appear in the 1926 year book of the Association, are printed in full insofar as they apply to cruiser racing. Other changes in other secthey apply to cruiser racing. Other changes in other sections of the rules are as follows: In the Gold Cup Deed of Gift provision was made that all entries must be made through a club, which is a member of the Association, and of which club the entrant must be a member. It was also provided that any club winning the Gold Cup should within thirty days after winning same, apply to the Racing Commission of the American Power Boat Association for sanction for the next race for the trophy and give notice of the dates desired, location of the course, etc.

The Deed of Gift for the Dodge Memorial Trophy was modified by the requirement that the course must be laid out on protected waters. The race committee is given the

out on protected waters. The race committee is given the option of arranging the race to consist of one heat of not less than 100 miles or more than 150 miles, instead of the ten to thirty mile heats previously required. It was also modified to read, whenever the match for the trophy consists of more than one heat, it shall consist of as many heats as may be necessary for one boat to win four heats. A boat must start and compete in good faith in each heat in order to be eligible to start in the subsequent heat, unless excused by the Race Committee. Provision was also made that a club winning the trophy must apply for a sanction for the next contest, within thirty days, as in the Gold Cup Deed of Gift mentioned above. tioned above.

Requirements for Division 1.—Cruisers, Division 2.—Fast
Cruisers, Division 3.—Speed Cruisers.

A Cruiser, Fast Cruiser or Speed Cruiser is a power boat meeting the speed requirements mentioned in rules for the particular Division, and equipped with permanent berths, fixed and sanitary plumbing, cooking arrangements and outfit necessary for living aboard. They must have a cabin, not glass, entirely closed in and either flush deck or self bailing cockpit. Watertight port lights and a limited amount of watertight glass sash aft of a point one-fourth of the length of the boat from the bow may be permitted if passed as safe and reasonable by the Race Committee. Cabin to have a space under carlins and above frames and floor timbers equal in height to 16 per cent. of the overall length of the boat up to six feet. This space to extend over one-quarter of the length of the boat and over one-quarter of the maximum beam and may be occupied by cabin, floor, berths or other equipment or construction, engine excepted. The waterline breadth shall be equal to or greater than

L.W.L. + 2½ feet. 7

In boats built previous to October 29, 1925, the waterline LWL breadth shall be equal to or greater than

Boats built subsequent to October 29, 1925, and not having the necessary amount of beam, as required by the above rule, can enter a race by having their rating increased by twice the amount of the difference between their actual beam on the waterline and the amount determined by the formula

- + 21/2 feet. 7

3. Midship Section.

The Midship Section is to be expressed in square feet, and is to be obtained as follows:

With the boat in the same trim as when being measured for load waterline length, take the beams of the boat at the water surface at the following points:

E-55% from the forward end of the waterline.

E-55% from the forward end of the waterline.
B-27½% from the forward end of the waterline.
S-22½% from the after end of the waterline.
At each of the above poin's (B. E. & S.) divide the beam into eight equal parts or stations and at the first (½th) of each, and at the third (½th) inboard station from either end, measuring perpendicularly from the water surface down to the underside of the boat's planking (C<sub>4</sub> & C<sub>5</sub>). Then compute the area of the section at each of the three sections (B, E & S) as follows: MS=

(Continued on page 80)

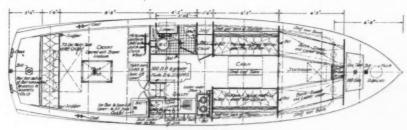


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AT LAST! THE IDEAL SMALL CRUISER. Developed as the result of 54 years' experience building America's finest pleasure craft. Able, Seaworthy, Comfort, Speed and Pleasing Appearance combined with LAWLEY workmanship. Accommodations second to none—Four real Berths, Toilet, Galley, Engine Room and Commodious Cockpit all in 38 feet. Six cylinder Model E-6 Scripps motor. Suitable for FLORIDA, coastwise cruising or the Great Lakes. Six only available for Spring delivery. Dimensions: 38 feet Over All, 10 feet 4 inches Beam, 2 feet 9 inches Draft.



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# Mr. Hoffar Registers a Complaint

N the Pacific Coast the Hoffar Marine Construction Company of Vancouver has long been known for the excellence of its standard ized cruisers. They have always had the reputation, too, of bein critical in the selection of power plants, using only good motors of national repute. So when Mr. H. S. Hoffar, the General Manager, recent wrote that he was sending a serious complaint under another cover, we we naturally concerned until this missive arrived:

"We are enclosing herewith three each of two photographs recently taken of the "Inomar III," which is the third boat of that name I have owned for my own personal use powered with an E-6 SCRIPPS motor. The only fault we can find with the motor is that it is such a well built and sweet running engine, that I am never able to keep the boat for long. Someone keeps coming along and begging me to part with it. The boat makes a speed of 12 real knots per hour. This is a good clip when you remember the boat is 48' x 10', with 3 foot draft."



Inomar III, 48'x10'x3', owned by H. §
Hoffar of the Hoffar Marine Constructes
Company, Vancouver, B. C. Inomar III
is powered by an E-6 Scripps and has a
speed of a good 12 knots an hour.

Boat builders in general know the value of SCRIPPS reputation in making their boats salable and guaranteeing proper performance and service. A background of 20 years' experience devoted exclusively to the manufacture of fine Marine motors is your greatest assurance. The product has always been conceded the highest rating by authorities everywhere and the service policy of the house back of the motor is reflected in the following from Mr. C. E. Heckle, Jr., Memphis, Tennessee:

"I want to take this opportunity of expressing my feelings toward the Scripps Motor Company. The performance of the runabout powered with one of your F-4 motors, of course, elects favorable commendation from everyone. That is not unusual. What impressed me most of all though is the courteous attention and thorough consideration of owners after the installation."

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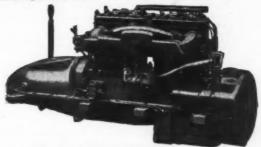
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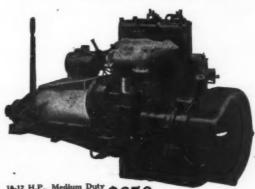
III

There are SCRIPPS engines for almost every type of boat: runabout, speeder, cruiser, auxiliary or commercial craft. The 1926 models are in production and the prices are strikingly reasonable.

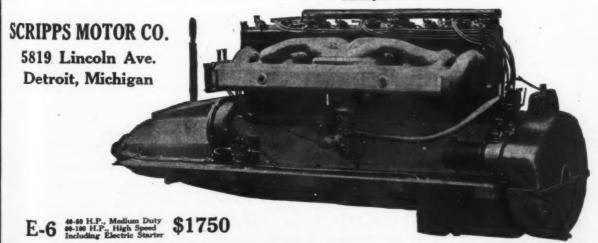




E-4 38-45 H.P., Medium Duty \$1250



D-2 16-12 H.P., Medium Duty \$650 Including Electric Starter



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#### A. B. P. A. Holds Annual Meeting

(Continued from page 76)

 $\frac{C_1 + C_3}{C_4}$  Then compute the combined midship section as fol-2

lows: M = .43 (B + E + S)

Where M equals combined area midship section, to be used in the formula for rating.

B equals area of section at a point 271/2% from forward end

of waterline. E equals area of section at a point 55% from the forward end of the waterline.

S equals area of section at a point 221/2% from the aft end

of the waterline. In sanctioned races all boats must be measured by an ap

In sanctioned races all boats must be measured by an approved instrument. (Measurers must communicate with the Official Measurer of the Association for this approval).

The Measurer shall, at the time of measuring, mark the forward and after ends of the waterline, and also the waterline on each side of the boat at the point where the midship section is taken; such marks shall be made in a plain and permanent manner by a race knife.

The Measurer at the time of measuring, shall remove from

the hull all marks placed there to indicate a previous measure-

Rating: Divisions 1 and 11—Cruisers and Fast Cruisers. Boats in divisions 1 and 11 shall be rated for the purpose of determining handicap and time allowance by one of the following formulas:

1, 
$$R = \frac{2 \text{ A N}}{M} + 22$$

1, R =  $\frac{2 \text{ A N}}{\text{M}} + 22$ 11, (Formula to be determined by Racing Commission at a later date).

Where gear box is used, formula 1 shall read as follows: 2.4 A N

$$R = \frac{2.4 \text{ A N}}{M} + 22$$

In twin screw installations, formula 1 shall read as follows:

$$R = \frac{1.8 \text{ A N}}{M} + 23$$

In triple screw installations formula 1 shall read as follows:

$$R = \frac{1.6 \text{ A N}}{M} + 22$$

In twin screw installations using the gear box, formula 1, shall read as follows:

$$R = \frac{2.16 \text{ A N}}{M} + 22$$

In triple screw installations using a gear box, formula 1, shall read as follows:

$$R = \frac{1.92 \text{ A N}}{M} + 22$$

In rating of handicap boats in divisions 1 and 11, either formula 1 or 11 must be used for all boats. Under no circumstances may boats use formula 1 and 11 when raced to-

Boats in Division 111, Speed Cruisers, shall be rated for the purpose of determining the handicap time by one of the

following formulas:

1, 
$$R = \frac{2 \text{ A N}}{M} + 33$$

11, (Formula to be determined by Racing Commission at a later date).

When a gear box is used, the value of A, (or H.P.), shall be increased 20%.

In twin screw installations, the value of A, (or H.P.), shall be reduced 10%.

In triple screw installations, the value of A, (or H.P.), shall be reduced 20% (See formula under heading of Cruisers, Fast Cruisers

above)

Division IV, Express Cruisers. Boats in Division IV, Express Cruisers, shall be rated for the purpose of determining the handicap time allowed, by one of the following formulas:

1, 
$$R = \frac{2 \text{ A N}}{M} + 44$$

11, (Formula to be determined by the Racing Commission at a later date).

When a gear box is used, the value of A, (or H.P.), shall

be increased 20%. In twin screw installations, the value of A, (or H.P.), shall be reduced 10%.

In triple screw installations, the value of A, (or H.P.), shall

be reduced 20%.
(See formula under heading of Cruisers, Fast Cruisers above).

Division V—Super-Express Cruisers.

Boats in Division V shall be rated for the purpose of determining handicap time allowed, by one of the following formulas:

1, 
$$R = \frac{2 \text{ A N}}{M} + 55$$

11, (Formula to be determined by the Racing Commission at a later date).

When a gear box is used, the value of A, (or H.P.), shall be increased 20%.

In twin screw installations, the value of A, (or H.P.), shall be reduced 10%.

In triple screw installations, the value of A, (or H.P.), shall be reduced 20%.

(See formula under heading of Cruisers, Fast Cruisers above).

#### Palm Beach Plans Perfected

Complete arrangements for the Palm Beach Yacht Club's annual Washington's Birthday regatta are now completed and the club is looking forward to the most successful affair ever staged in the waters of Lake Worth.

While there will be a number of races for every sort of boat, the two main events will be for the Royal Poinciana Trophy for the 151-cubic inch Class Hydroplanes and the Bradley Gold Challenge Cup for Unlimited Displacement Boats.

These prizes are rated as being the finest in the world in their divisions and the races are always keenly contested over one of the most ideal racing courses in the world.

The 151-Class race will again be an invitation affair with only the most representative boats in America in competition. The invitations which have been issued from the office of Gerald T. White, eastern director of the Mississippi Valley Power Boat Association and northern representative of the Palm Beach Yacht Club follow:

Eastern Team:

Chris. Ripp, New York. Owner former world's champion. Joseph Clayton, New York, New York State champion. Otto Stoye, Rockville Center, N. Y. Winner Gold Cup

Adolf Gobel, New York. Atlantic Coast champion.

Western Team:

C. E. Padgett, Quincy, Ill. Present holder of the trophy. L. E. Selby, Pekin, Ill. Winner at the White Lake Re-

gatta.
M. V. Harkless, Harvey, Ill. Winner of many Mid-West-W. M. Waugh, Peoria, Ill. Present holder of world's record

#### Chesapeake Bay Team:

J. G. Beard, Washington. Runner-up at many important meets. Wm. McP. Bigelow, Easton, Md. Contender at all im-

portant meets.

This field of ten boats is probably the fastest of its size ever gathered in the history of the sport.

In the Bradley Gold Challenge Trophy race there will be a number of displacement boats known far and wide as the best in the class. Rodman Wanamaker's Little Old Man won last year but it is a surety she will have plenty of milearminute competition this time.

The dates of the regarda as spectioned by both the Mis-

The dates of the regatta as sanctioned by both the Mississippi Valley Power Boat Association and the American Power Boat Association are February 20, 21 and 22.

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boats.

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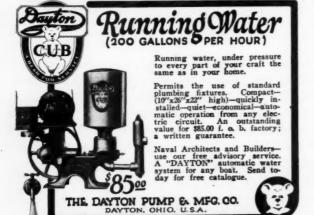
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#### Navigation By Radio

(Continued from page 74)

cording to the needs of the terrain. With an absolutely fixed beam in any one direction no directional radio compasses are needed or any other special equipment. The beam could be arranged to cover a danger area much after the manner in which some of our coastal lights have a red sector which warns of danger. A ship running into a radio beam would know that it was in the wrong water and steps could be taken through regular bearings to restrict the

who taken through regular bearings to rectify the error.

Where positive aids to navigation are needed under all conditions, the radio compass and beacon is coming into almost universal use. Within a few years it is probable that even yachts and motor boats, cruising along the coast take full advantage of such beacons.

#### Jacksonville Is Yachtsman's Paradise

(Continued from page 21)

is as hard to get into as J. P. Morgan's private office. The only way I gets in is that I gets elected a non-resident member before they gets acquainted with me, and then I fools them and locates here. At the time I joins, I is the only yachtsman in the Yacht Club. I ties up to the club dock in Kex and I goes to one of the dances—they has the swellest series of dances of any place in the world. Seeing as how it series of dances of any place in the world. Seeing as how it was a YACHT club dance, I appears in my full dress mess jacket, I does, because that is the way they does down in Marblehead. Well what does you suppose happens, Chap? A sweet young thing, she asks me, is I a night watchman in a brewery or what. So I sees I is wrong and I sells Kex and I wears a regular dinner jacket after that, and then the yacht club, it decides to go in for yachting, and I is wrong as usual.

yacht club, it decides to go in for yachting, and I is wrong as usual.

The other day they holds the annual yacht club meeting. They elects Arthur Cummer Commodore. Now Arthur Cummer, he is a real yachtsman, in fact he is the feller what discovered the inside route from New York to Florida and he makes it years and years ago, before you ever hears of it, and as they was only six inches of water in it in them days, they carries the boat most of the way on their backs, they does. And they elects Colonel Raymond C. Turck Vice Commodore and he is the feller what put the first real speed boat on the River, and Jim Stockton he is Fleet Captain, and he not only is President of the Believers in Jacksonville, but he can't sleep nights thinking about boats, so you sees, the Florida Yacht Club, it has got salt water in its eye. Then they votes to move the club out to Venetia and build a hundred thousand dollar clubhouse on the point with the St. Johns River on one side and a swell big yacht basin in front of it, and pretty soon we gets up a one-design sail boat class and has races for them and for everything from a outboard yacht to them fast babies.

Besides this, the real estate boys, they has discovered the

from a outboard yacht to them fast babies.

Besides this, the real estate boys, they has discovered the River, and they is putting up developments on both sides of the River and the finest thing that they builds it is a yach harbor and a clubhouse. Now I doesn't want you to misunderstand me Chap, I is not in the real estate business, in fact, I is the only Northerner in Florida at the present time what is NOT in the real estate business. Furthermore, I hopes to tell you, that I is down here for keeps, in spite of the fact that the income tax commissioner up in Boston, he doesn't believe me. He puts in all his spare time trying to get me to pay a tax in Massachusetts. All during the summer, he keeps writing to me to find out is I still in Florida, and I says yes, and he sends me another form to fill out. Finally he sends one that says, "Why is where you claims your present domicile it is?" and I writes back and says I is getting tired of his fun and in answer to his question, I says, "The reason I selects Florida is on account of its salubrious climate, its beautiful women and the plentiful supply of licker, and I hasn't had another peep out of him since, and that is the truth.

#### New Boston Quarters

C

The Black & Decker Manufacturing Company announce the removal of their Boston branch office to new and very much larger quarters located at 62 Brookline Street, Boston. The building at this address is of steel and concrete construction, has beautiful show windows, and is located within a stone's throw of a number of jobbers. This new office will be in charge of A. D. Geiger, recently appointed branch manager of the Boston territory to succeed D. G. Caywood, who has been put on special work by the company.



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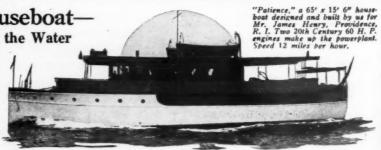
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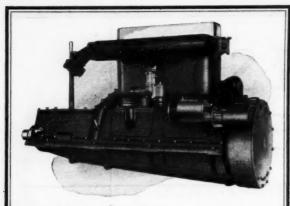
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#### Snapper, a Sailing Dinghy

(Continued from page 36)

the necessary amount of material for the frame so that you will be sure to get good tough white oak that will bend well when steamed and not split or fracture when the fastenings are put in. The frames should be tacked lightly to the ribbands to hold them in place while the planking is being put on. To make a nicely finished job the inside corners should be neatly rounded.

The planking may be either smooth or lan strack but the

The planking may be either smooth or lap streak but the smooth plank will probably be easier for the amateur than the lap streak system. If smooth, the plank should be 7/16 inch thick when finished but if the builder is experienced it may be reduced to 3/8 inch in order to make a lighter boat. If lap streak planking is used 3/8 inch will be ample. Native white cedar is the best material to use for the planking but if a little extra touch is desired the sheer strakes may be made of mahogany. The planking should be fastened to the frames with copper nails riveted over burrs and brass screws should be used wherever fastenings cannot be riveted. should be fastened with brass screws where they cross the keel plank. The planking should be put on so that the seams are fitted closely on the inside and left open about 1/32 inch on the outside for caulking. The caulking should be a thread of cotton rolled or driven into the seam after which the seams are painted and filled with white lead putty. The fastenings should be slightly countersunk and also covered with white lead putty after the first coat of paint has been put on. Care must be taken to set the fastenings deep enough to allow for planing the outside of the boat so that it will be smooth and fair.

The centerboard trunk is fitted after the boat is planked and is formed of two bed pieces of 1 inch white pine fitted to the inside of the keel and notched to fit down over the frames where they cross the keel forward of the centerboard slot. The headledges forming the ends of the centerboard well are of oak 1 3/4 inches wide and 3/8 inch thick; these extend through the keel so that they can be made with the keel so that the way the keel so that the way the way the keel so that they can be made with the way the w through the keel so that they can be made water tight. The bed pieces are set in white lead and are fastened with large brass screws from the outside of the keel. It will be noted that the bed pieces extend forward and overlap the heel of the stem so that they form the mast step. The upper sides of the centerboard trunk are of 3/4 inch white pine, 9 inches of the centerboard trunk are of 3/4 inch white pine, 9 inches wide, and fitted to the upper side of the bed logs with a water tight joint. A thin mahogany cap should be fitted over the after part of the trunk to prevent water from splashing up into the boat. It will be noted that the forward end of the trunk is cut down slightly in height to clear the upper part of the center plate when pulled up.

The center plate when pulled up.

The center plate is to be cut from 3/16 inch boiler plate to the shape shown. It is hung on a bolt through the bed pieces with a slot cut in the plate so that it can be shipped, or unshipped, without taking out the bolt on which it hangs. The center plate is hoisted and lowered by means of a small pur-chase of double and single brass blocks as shown on the plans with the hauling and carried to a cleat on the side of the trunk.

The gunwale is of oak, 1 1/4 x 3/4 inches, fitted to the inside of the frames at the height of the sheer and through riveted to plank and frames. Oak knees are to be fitted on either side at the stern to brace the stern transom and an oak breast hook is fitted at the bow to tie the gunwales to the stem. Opposite the mast an extra strengthening piece is fitted just below the gunwale which is 3 feet long, 3/4 inch thick and 2 1/2 inches wide tapering to 3/4 inch at the ends. This is fastened to the gunwale and also to the frames. The mast thingst is a piece of oak 6 inches wide by 7/8 inch mast thwart is a piece of oak 6 inches wide by 7/8 inch thick securely fastened at each end to the gunwale strengthening pieces.

ening pieces.

The seat amidships should be mahogany or white pine, 8 inches wide and 5/8 inches thick. It is fastened to the top of the centerboard trunk and to the sides of the boat with small wood or metal knees. The stern seat should be of the same material as the 'midship seat and may be fitted as shown on the plan or as may suit the ideas of the builder.

The floor boards should be of 3/8 inch cedar, screw fastened to the frames. They may be either placed directly on the frames or laid on floor beams if it is desired to keep the floor up away from the bottom of the boat.

The rudder should be made to the shape shown on the

up away from the bottom of the boat.

The rudder should be made to the shape shown on the plans and may be of oak or mahogany. It should be I inch thick above the water line and tapered to thin edges below the water. Any of the stock hardware fittings for rudder hangers may be used. The tiller is of oak, shaped as shown and fitted into a socket in the head of the rudder.

The painting and finishing may be left to the individual taste of the owner but a very attractive painting scheme (Continued on page 88)

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Sept. 29th, 1925.

Mr. Howard W. Lyon, 1819 Broadway, New York City.

Dear Mr. Lyon: --

it thought you would probably be interested in the performance of my boat "Kroywen" at Manhasset Bay on August 29th. The fastest lap at 47.5 miles an hour and the average 46.3 miles an hour for twelve miles for a heavy stock boat. twelve miles was actually traveled) is far better than lextend any boat of this sort could accomplish, and it certainly is a fine tribute to the builder of the boat. At the miles an hour on the straightsways. Since that time, I have fun this boat over the one-half mile measured course at Cyster the tide was 53.75 miles an hour.

You have my assurance that not a mingle bit of equipment had been removed from my boat to lighten it. I had all the life preservers, tools, fenders, rope, oar and anchor that came with the boat. In fact, I had extra tools and a five gallon can of oil for use in case of emergency.

Bronze with which the bottom was painted for the Bridgeport racing paint, or pot lead; as a matter of fact this boat had been in the water continually since delivery to se the early lutely a stock boat. I had seven passengers on my try on the the race from Oyster Bay to Manhaeset Bay, and after stock model idea.

My boat has been performing wonderfully well all summer, and I am frank to admit to you far beyond my expectations in respect to reliability, speed, comfort, and ease of operation. Any time you want to quote me to any prospective without reservation that after ten years' exprience with various types of fast runabouts, I am well satisfied, everything considered, that you have a product far superior in all respects to anything similar on the market to-day.

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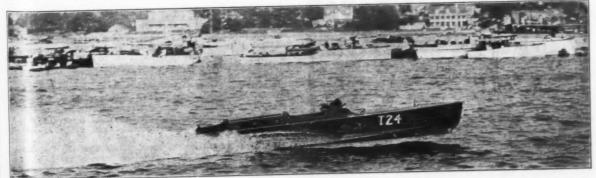
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BROOKS BOAT CO., Inc., Dept. 33, Saginaw, Mich. Originators of the pattern and KNOCK-DOWN system of Boat Building



#### Snapper, a Sailing Dinghy

(Continued from page 86)

would be to give the bottom two coats of light green anti fouling marine paint up to the painted line shown on the sail plan and the topsides white with a mahogany sheer strake finished bright. The inside of the boat can be painted buff color with varnished seats and floor boards.

color with varnished seats and floor boaros.

The rigging is very simple and requires but little explanation. The mast is made of a piece of clear spruce, or fir, and is 21 feet 8 inches long. It is 2 1/2 inch diameter at the mast thwart and tapered to 1 1/4 inch at the head. A sheave should be fitted in the head for the halyard and a piece of 5/8 inch wide brass track screwed to the after side for the slides on the sail. Three stays of 1/8 inch diameter galvanized wire rope are fitted with an eye splice around the mast at the height shown on the sail plan and may be set up with either turnbuckles or halyards at the lower ends to eye plates in the gunwales and stem head. Small oak cleats should be screwed to the mast to hold the upper eyesplices of the rigging in place. The stays are not carried all the way to the mast head as the boat will sail better if the mast is allowed to bend, or whip, a little. The boom is a light spruce spar 10 feet 9 inches long and 1 5/8 inch diameter in the middle, tapered to 1 1/4 inch at ends. Any small stock gooseneck may be used to fasten the boom to the mast and the sail should be laced to the boom with small cotton line. The sail should be laced to the hoist, 10 feet 6 inches on the foot and 20 feet 6 inches on the after leech. Reef points are hardly necessary but may be fitted if desired.

If the boat is to be carried on the davits of a larger yacht suitable hoisting rings should be placed in either end of the boat for the davit falls and it would be advisable to fit a cotton rope fender around the outside of the gunwale to prevent chafing the topsides of the larger yacht and to avoid damage to the dinghy in coming alongside.

#### L-A Twin a Speedy Outboard Motor

With the constantly growing interest that is being manifested in outboard motor racing, not only by the Mississippi Valley Power Boat Association, but also in the circles of the American Powerboat Association, manufacturers of outboard motors of all types see a great summer ahead for outboard racing enthusiasts, according to A. L. Lockwood, president of the Lockwood-Ash Motor Company of Jackson, Michigan.

Already speed is the big topic of conversation in outboard motor circles, and when it comes to talking speed Mr. Lockwood, wh obuilds the well-known L-A Twin, is not taking a back seat for any of them.

"We have never featured the L-A Twin primarily for it speed," states Mr. Lockwood, "but the speed is there just the same. The L-A Twin has been noted, just as the L-A Single Cylinder Outboard Motor was noted before it, for its sturdiness, its all-round dependability and its ease of operation. Its reliability and its freedom from trouble, together with its special features, such as automatic tilting of friction type and the patented L-A Slipping Clutch Propeller, have been our Main L-A talking points.

"In the L-A Twin we have developed a motor that is light in weight, though we haven't sacrificed strength and sturdiness to get light weight. Complete, ready to operate, the L-A Twin weighs 52 lbs. As it develops full 3 h.p., it is conceded to be the most powerful motor of its weight in the outboard field, and with a speed of at least 8 miles per hour on an ordinary rowboat, it is also considered to be the speediest motor of its rated power.

"Perhaps 8 miles per hour wouldn't win many races in the outboard class in which the L-A Twin competes, but on the basis of tests we have made on boats designed for racing, we are confident that the L-A Twin will develop a speed considerably in excess of the speed we claim for the L-A Twin on ordinary rowboats. At least we expect our Twin to give a good account of itself in the races in which it is entered."

Other features which make the L-A Twin particularly desirable, according to Mr. Lockwood, include an extra powerful magneto, damage-proof gas tank, Alemite lubrication, a specially designed float-feed carbureter, and rope and rudder steering.

Among resorters, fishermen and workboat owners, the L-A Twin has won an enviable reputation, due to its all-around serviceability and its reliability. And now that the boating fraternity is recognizing its speed possibilities, the Lockwood-Ash Company expects the splendid reputation of the L-A Twin to spread in still wider circles.

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## For Florida



# THE BANFIELD 30 FOOT SEA SKIFF CRUISER

THE Banfield 30 Footer is the "Sportsman's Choice," Snappy in appearance, fast and extremely Seaworthy. Graceful lines, raking bow, clean cut stern, windshield affording full protection without excessively adding top hamper and wind resistance are a few of the Ear Marks of a Genuine Banfield Sea Skiff.

For Deep Sea, Gulf Stream Fishing and rough weather going in Florida Waters this boat has no equal in its size and class. Its shallow draft and strength of construction permit it to do the unusual.

Cabin contains all the requisites for Southern Cruising. Ample accommodations for party of four. Beautifully finished with Mahogany trim and all necessary equipment.

#### Powered with

70 H.P. Kermath Motor Speed 16 M.P.H.

Price Complete \$5150

Twin Screw 70 H.P. Kermath Motor Speed 25 M.P.H.

Price Complete \$6700

100 H.P. Kermath Motor Speed 19 M.P.H.

Price Complete \$5500

290 H.P. Sterling Dolphin Special Speed 33 M.P.H.

Price Complete \$8500

200 H.P. Hall-Scott Motor Speed 31 M.P.H.

Price Complete \$7750

Other BANFIELD Models include the 34 Foot De Luxe Cruiser, 26 and 34 Foot Florida Fishing Boys, Express Cruisers, Yacht Tenders, etc.

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This Compact
Marine Electric
Closet is designed
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motor boatman.

It is absolutely reliable and sim-ple to operate, requiring no pre-vious instructions.

No cruiser should be without this beautiful fixture. 32 and 110 Volts.

U. G. LEE & CO. N. Western Ave. Chicago, Ill.



#### Reviving the Yacht Club

(Continued from page 23)

Surgeon, enforce the Laws and Regulations of the Club, and to preside at all meetings of the Club.

Sec. 2. It shall be the duty of the Vice-Commodore to assist the Commodore in the discharge of his duties, and to

officiate in his absence.

Sec. 3. It shall be the duty of the Rear-Commodore to assist the Commodore and Vice-Commodore in the discharge

assist the Commodore and Vice-Commodore in the discharge of their duties, and to officiate in their absence.

Sec. 4. It shall be the duty of the Secretary:

(1) To keep Minutes of the Meetings of the Club and of the Board of Trustees, in books provided for that purpose, and to have the custody of all reports and documents connected with the proceedings of the Club.

(2) To keep a correct roll of the members, together with the dates of their election.

(3) To receive applications for membership, to transmit the same to the Membership Committee, and to post a list thereof in the Club House.

(4) To notify each member-elect of his election.

(4) To notify each member-elect of his election.(5) To keep a correct list of the yachts enrolled in the Club.

(6) To collect all moneys due and pay the same to the Treasurer.

(7) To render a statement of the affairs of the Club at each stated meeting of the Club.

(8) To conduct the correspondence of the Club; to give notice of all meetings of the Club, and in case of special meetings to state the business intended; to notify members of their election to office, and of their appointment to serve on Committees and to perform such other services are may be reform such other services are may be reform such other services are may be reformed.

election to office, and of their appointment to serve on Committees, and to perform such other services as may be required by the Club or by the Trustees.

Sec. 5. It shall be the duty of the Treasurer:

(1) To have charge of the funds of the Club and to keep a correct account of all moneys received and paid out in book provided for that purpose, and, under the direction of the Board of Trustees, to disburse the funds.

(2) To deposit the funds in the name of the Club in a depository or depositories approved by the Board of Trustees.

(3) To present, at each stated meeting and whenever so requested by the Board of Trustees, a detailed account showing the financial condition of the Club, and file the same, with

ing the financial condition of the Club, and file the same, with

vouchers, with the Secretary.
Sec. 6. It shall be the duty of the Measurer to measure achts, to give them rating, and to report the same to the

Secretary.

Sec. 7. The Fleet Captain shall be the Executive Officer of the Commodore, and shall hold office during his pleasure.

Sec. 8. It shall be the duty of the Fleet Surgeon to look after the sanitary condition of the fleet and to perform such duties pertaining to his profession as the Commodore shall

direct. Article V.

#### TRUSTEES

Sec. 1. There shall be a Board of Trustees, which shall consist of the Commodore, Vice-Commodore, Rear-Commodore, Secretary and Treasurer, ex-officio, and six other mem-

Sec. 2. The Board of Trustees shall organize within thirty days after the annual election by the election of a President, who shall serve during the ensuing year.

#### Article VI.

#### POWERS AND DUTIES OF THE BOARD OF TRUSTEES.

Sec. 1. The Board of Trustees shall meet at least once in every month.

Sec. 2. Five members shall constitute a quorum. Sec. 3. They shall have entire authority in the

Sec. 2. Five members shall constitute a quorum.

Sec. 3. They shall have entire authority in the management of the affairs and finances of the Club, and shall have general control of all of its property. All rights and powers connected therewith shall be vested in them.

Sec. 4. They shall make such rules as they deem proper respecting the use of the Club House and grounds; prescribe rules for the admission of strangers; fix penalties for offences against the rules, and make rules for their own government and for the government of the Committees appointed by them.

Sec. 5. All appropriations of the funds of the Club shall be made by the Board of Trustees.

Sec. 6. They shall audit the accounts of the Secretary, Treasurer and of the Committees.

Sec. 7. They shall have power to limit indebtedness of a member to the Club, except for dues.

Sec. 8. They shall elect to membership in the Club, as hereinafter provided, such candidates as they consider desir
(Continued on page 94)

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## The achievements in 1925 of Consolidated



The World's largest builder of fine pleasure boats and their propelling machinery is Consolidated.

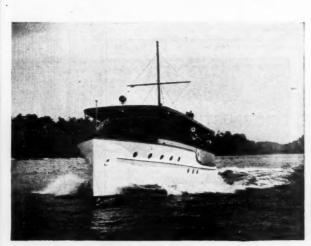
More than 3000 yachts of all sizes, kinds and character have been built for the leading yachtsmen of the country during the past 40 years. The facilities of the yards, and the output today, are greater than ever.



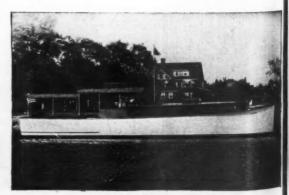
HE greatly increased demand for pleasure craft this year found

Consolidated prepared with unequalled experience and facilities for designing, building and powering boats of the highest quality.

A few of the many hulls launched from Consolidated Yards in 1925 are illustrated on this, and also the facing page. It will be noted that these boats range in length from 34 feet for the Larchmont 2ndto 118 feet for the luxurious steel yacht Janey III: typifying the resources of Consolidated to produce every class of



Commodore-65-foot Cruiser



Julie-M-44-foot Day Cruiser

pleasure boat from Playboats to Steel Yachts.

In most cases, Speedway Engines were selected to power the Consolidated output in 1925.

There can be no more substantial guarantee for yachtsmen than the consistent achievements of Consolidated over a period of many years.

The Nashira designed and built for Mr. Richard F. Hoyt of New York. 81-foot Cruiser, a new design with all the best features of a houseboat: yet capable of 28 miles per hour.

Commodore designed and built for Commodore A. A. Schantz of Detroit. 65 foot Cruiser. Equipped with two Model MR Speedways, giving a speed of 16 miles per hour.

Julie-M designed and built for Mr. R. M. Smith of New York. 44-foot Fast Day Cruiser. Powered with two Model MR-6 Speedways, giving a speed of 26 miles per hour.

Miss Larchmont II designed and built for Mr. Frank E. Campbell, Jr., of Larchmont, New York. 34-foot Playboat, combining the speed of a runabout with the comfort of a cruiser. Equipped with Model MR Speedway, giving a speed of 23 miles per hour.

The Idler designed and built for Mr. George M. Brown of New York. 92-foot Cruiser with accommodations for an owner's party of eight. Equipped with two Model R Speedways, giving a speed of 18 miles per hour.

Janey III built by Consolidated from designs of John H.Wells, Inc., for Mr. Walter O. Briggs, Detroit. 118-foot Steel Yacht. One of the largest Diesel Yachts yet built, giving a speed of 14 miles per hour.

Hiawatha designed and built for Mr. J. B. Ford of Detroit. 85-foot: North and South Cruiser, for all year service. Equipped with two Model R Speedways, giving a speed of 20 miles per hour.

To those interested, we will be pleased to submit designs and estimates on request.

CONSOLIDATED SHIPBUILDING CORP.
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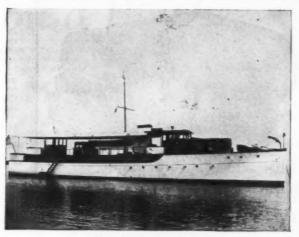
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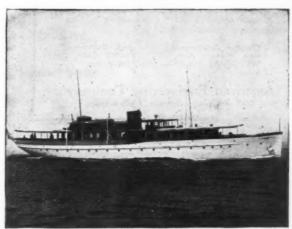
Day Cruisers North and South Cruisers Motor and Steam Yachts Speedway Gasoline Engines



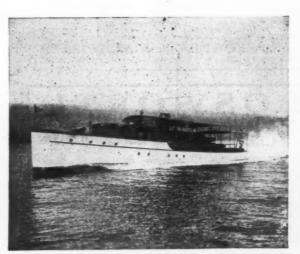
Miss Larchmont II-34-foot Playboat



The Idler-92-foot Cruiser



Janey III-118-foot Steel Yacht



Hiawatha-85-foot North and South Cruiser



Costs less than any other power steerer on the market. Has a much smaller motor than normally would be required. Consumes very little power, because of the high efficiency of the spur gear drive and because power is used only when you actually are manoeuvring the rudder. Rugged, compact, easy to install, noiseless and quick-acting. Also furnished with air motor.

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SAFTIBOAT, with its out-of-water aerial propeller, can run swiftly and smoothly on five inches of water and operate in swift water. SAFTIBOATING is a clean, healthy, exhibitanting, aafe, economical sport. SAFTIBOATS from 2 to 30 passengers; 7 to 400 H.P.

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#### Reviving the Yacht Club

(Continued from page 90)

able. Such election must be by ballot at a regular meeting of the Board, and two negative votes shall reject. No rejected candidate shall be eligible to membership within six months after rejection.

after rejection.

Sec. 9. They shall have power to suspend or expel any member for violation of the Constitution or By-Laws, or for conduct which they shall deem improper or prejudicial to the Club; but no member shall be expelled or suspended for longer than thirty days without a hearing.

Sec. 10. They may, at a regular meeting, re-admit to membership—without the payment of a second initiation fee—any former member whose resignation has been fully accepted. Such re-admission must be by ballot, and two negative votes shall reject. No rejected candidate shall be again proposed for reinstatement within six months after rejection.

Sec. 11. They may, as hereinafter provided, drop from the roll, any delignates much results any reinstate such

Sec. 11. They may, as hereinafter provided, drop from the roll any delinquent member, and also may reinstate such members, as hereinafter provided.

Sec. 12. They shalf appoint all Standing Committees, with

Sec. 12. They shalf appoint all Standing Committees, with full authority over them, except as hereinafter provided and shall appoint such other Committees as shall seem to them necessary.

Sec. 13. They shall have authority to make, in their discretion, appropriations for the clerical assistance of the Secretary.

#### Article VII.

#### STANDING COMMITTEES.

Sec. 1. The Standing Committees shall be a Membership Committee, a House Committee, a Race Committee, a Mooring Committee and an Entertainment Committee. They shall be appointed annually by the Board of Trustees at the first regular meeting after the annual election.

Sec. 2. The Membership Committee shall consist of three

Sec. 2. The Membership Committee shall consist of three members. They shall investigate and pass upon the qualifications of all candidates for membership, and report their conclusions to the Board of Trustees.

Sec. 3. The House Committee shall consist of five members. They shall have the general management and control of the house, grounds and employees of the Club. They shall receive and redress complaints.

Sec. 4. The Race Committee shall consist of five members.

Sec. 4. The Race Committee shall consist of five members. They shall receive entries for all races, act as Judges thereof, and in the event of the absence of any of them, appoint a substitute or substitutes, provide stake boats, appoint members to assist the Committee, and have the direction and control of all races. All disputes shall be subject to their decision, which shall be based on the sailing rules and regulations, so far as they apply, and, when not, the ordinary rules of the sea shall prevail. They shall have full power to disqualify any yacht which shall have violated any rules of the Club or custom of the sea.

They shall keep a record of their proceedings, and of all races, with full details, in a book provided for that purpose. There shall be no appeal from the decision of this Committee.

Sec. 5. The Mooring Committee shall consist of one member, who shall locate the moorings of all yachts in the Club. Sec. 6. The Entertainment Committee shall consist of three members. They shall provide and take charge of all entertainments given by the Club.

#### Article VIII.

#### NOMINATING COMMITTEE.

Sec. 1. There shall be a Nominating Committee of five members, who shall be elected by ballot at the October stated meeting.

The Nominating Committee shall nominate candi-

Sec. 2. The Nominating Committee shall nominate candidates for all elective offices to be filled at the next annual meeting, and shall cause the names of such candidates, with the offices for which they are nominated, to be posted on the Club House bulletin at least three weeks prior to the annual meeting.

Sec. 3. Any six members in good standing may nominate

Sec. 3. Any six members in good standing may nominate candidates for any office by posting the names of such candidates, with the offices for which they are nominated, on the Club House bulletin at least two weeks prior to the annual meeting. Such nomination shall be subscribed by the members nominating.

members nominating.

Sec. 4. No candidate shall be elected to any office unless he shall have been nominated as hereinbefore provided.

#### Article IX.

#### ELECTIONS.

Sec. 1. The Commodore, Vice-Commodore, Rear-Commodore, Secretary, Treasurer and Measurer shall be elected at (Continued on page 96)

E

## Have You a Boy?

What could make his Christmas merrier than a real sailing yacht, built by seafaring men in a famous seafaring town? What could be more instructive or more effective in developing his knowledge of sailing and his love of the water than a

#### MARBLEHEAD MODEL YACHT

BUILT by hand in quaint old Marblehead where the salt of the sea is in every man's blood and where sailing traditions are dear to the hearts of all.

A Marblehead Model Yacht will bring you and your boy's pleasures closer together. They are not toys in the sense that we know toys. Marblehead Model Yachts are small editions and accurate copies of various well-known racing classes.

Marblehead Model Yachts are built to sail and do with all the beauty and grace of the big originals. They are perfectly balanced and carefully rigged. Each model is constructed of durable wood, is finely polished and finished to a degree never before attained in a toy yacht. Below are a few of the types we build. Make your boy truly happy on Christmas by giving him a real boy's toy—he will enjoy it many times more than you enjoy your own boat.

#### Built by Hand, Correctly Designed and Rigged, Perfectly Balanced and Really Sail



BAR HARBOR CLASS 24 INCHES

This is a very popular type with the youngsters because it is extremely light and fast. Has bollow hull. Rigged with Mainsail, Forestay and Jib. Finished in Black and Red, Black and Green, Natural and Red, Natural and Green. The same hull without bowsprit can be had with special racing Marconi Rig. Price either Bar Harbor or Marconi \$12.50.

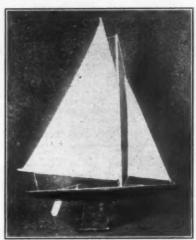
Marblehead Model Yachts are carried in stock by the leading department stores and toy shops. If your favorite store does not carry them order direct from us.

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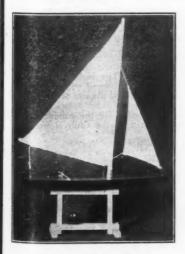
#### A Few of the Many Stores Selling Marblehead Model Yachts

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Mandel 1	Brothers						Chicago	o, III.
Foley Br	ros. Drv	Goo	abc	Co	8	San /	Intonio,	Texas
Joske B	rothers					- F	Iouston,	Texas
Strawbri	dge &	Clot	hier			Ph	illadelph	ia, Pa.
Scruggs,	Vander	VOOI	rt å	B	arr	ey.	St. Loui	s, Mo.
Raphael	Weil &	C	0. "	1	San	Fr	ancisco,	Calif.



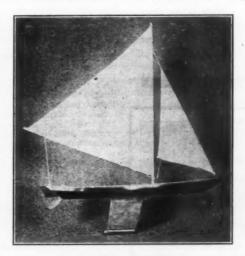
EIGHTEEN INCH CLASS Solid or Hellow

This model is a small reproduction of the famous als meter racing yashts that competed in the International Races on Long Island Sound last summer. The Solid model is rigged with a Marconi mainsail and also with the old style Gaff and finished in Black and Green and Black and Red. The Hollow model is rigged the same at he Solid except that it has a brass spreader thru the mast and being much lighter it sails very fast. Finished in Black and Red. Black and Cheen. Watconi in Black and Cheen. Watconi of Gaff rigged, \$1.50; Solid, Marconi or Gaff rigged, \$5.50.



TWELVE INCH WATERBUG

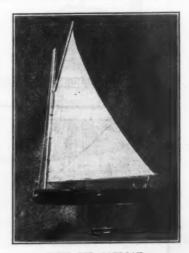
his is the ideal toy for the tot of three to five. It is an exact copy of the Waterbug Racing Cass of Yachts usually manned by members of the junior yacht clubs. Solid and durable, almost unbreakable. Price with Marconi Rig, as must account with Sonder Rig \$1.75 each.



MARBLEHEAD RACING DORY 24 INCHES

Here is a very sturdy boat. Has leg-o'-mutton sail and is a faithful reproduction of the boat so popular in Marblehead Harbor and New England ports. Highly polished and finished in Black and Green, Natural and Green. Price \$10.50.

All prices include Percel Post carrying charges and cradle or stand for boat. check with order. Will ship C. O. D. if desired.



CAPE COD CATBOAT

A hollow boat, has the beautiful sheer of the "Cape Cod Cata," the old fashioned single head-stay, high peaked mainsail and large "barn door" rudder. A very fast and handsome boat. Finished in Black and Red, Black and Green, Natural and Red, Natural and Green. Price \$10.00, Send money order or

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#### THE JOHNSON MARINE REVERSE CEAR

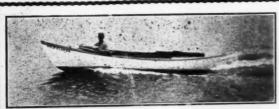
#### An Absolutely Reliable Gear

is a big factor in the satisfaction you derive from your motor boat. And absolute reliability means nothing less than a Johnson Gear.

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Smooth-sided 20-ft. Motor Dory, motor enclosed \$585

Outboard motor boats. Row boats. Sailing Knockabouts. 24-foot R. D. Cabin Cruiser, \$1,500

#### Cape Cod Ship Building Corp.

18 Tremont St. Boston, Mass. Dept. "M"

#### Reviving the Yacht Club

(Continued from page 94)

the annual meeting of the Club, and shall hold office for one year, or until their successors are elected.

year, or until their successors are elected.

Sec. 2. At each annual meeting there shall be elected three members of the Board of Trustees, who shall hold office for two years, or until their successors are elected.

Sec. 3. Voting shall be by ballot, and a majority of the votes cast shall be necessary to elect.

Sec. 4.—All vacancies in elective offices shall be filled by the Board of Trustees.

#### Article X. MEMBERSHIP.

Sec. 1. The Club shall be composed of active, honorary, Army, Navy and flag members, the number of active members, however, shall be limited to six hundred.

Sec. 2. Each candidate for active membership must be proposed, in writing, by two members. Applications for membership must be subscribed by the candidate, must state his name, occupation and address, and include an agreement to comply with the Constitution and By-Laws. All applications comply with the Constitution and By-Laws. All applications comply with the Constitution and By-Laws. All applications must be sent to the Secretary at least ten days prior to the meeting of the Board of Trustees, at which action is taken thereon, and the Secretary shall immediately refer the application to the Membership Committee. The names and addresses of all candidates, with the names of their proposers, must be posted in the Club House for at least one week before action is taken thereon. All proceedings of the Trustees upon any proposal for membership, except the final action thereon, and all communications to them, or to the Membership Committee in reference there-

to, shall be treated as confidential.

Sec. 3. Any member in arrears for dues, or other indebtedness, for a period of three months, shall be notified by mail by the Secretary at his last known address, and his name, with the amount due, with any additional indebtedness, shall be posted on the Club House bulletin as delinquent. If the amount posted be not paid in full within one month thereafter, the name of the delinquent shall be reported by the Secretary to the Board of Trustees at their next meeting. The Board of Trustees may drop from the roll the name of such delinquent, who shall be thereafter excluded from access to the Club House grounds. A member dropped from the to the Club House grounds. A member dropped from the roll for non-payment of dues, or other indebtedness, may, upon payment of the same, at the discretion of the Board of Trustees, be re-instated to full membership.

Sec. 4. No member in arrears for dues, or other indebtedness, shall be eligible to hold office, or entitled to vote, or to

enter in any race.

Sec. 5. Any member not in arrears for dues, or other in-debtedness, may tender a written resignation of his member-ship to the Secretary, who shall report the same to the Board of Trustees at their next meeting for their action.

Sec. 6. Honorary members may be elected at any meeting of the Club after recommendation by the Board of Trustees, but three negative votes shall reject. They shall be exempt from dues and assessments; they may speak at all meetings

but shall not vote or hold office.

Sec. 7. Any woman owning a yacht is eligible for election to the Club as a flag member, and shall, upon election, pay annual dues but no initiation fee. Such membership shall continue only during the period of yacht ownership, and carries only the following privileges: The right to fly the Club Burgee; to have private signal registered with the Section of the Club Burgee; to have private signal registered with the Section of the Club Burgee; to have private signal registered with the Section of the Club Burgee; to have private signal registered with the Section of the Club Burgee; to have private signal registered with the Section of the Club Burgee; to have private signal registered with the Section of the Club Burgee; to have private signal registered with the Section of th retary; to enter yachts in Club Races; and the use of the Club

House and floats.

Sec. 8. Members shall be responsible for the conduct and indebtedness of all persons admitted to the Club House or grounds at their request.

#### Article XI. MEETINGS.

Sec. 1. The Annual Meeting shall be held on the first Tuesday of March, and another Stated Meeting shall be held on the first Tuesday of October in each year.

Sec. 2. The Secretary shall call special meetings at the

direction of the Commodore, in his discretion, or upon the

written request of ten members.

Sec. 3. Ten members shall constitute a quorum for the

transaction of business.

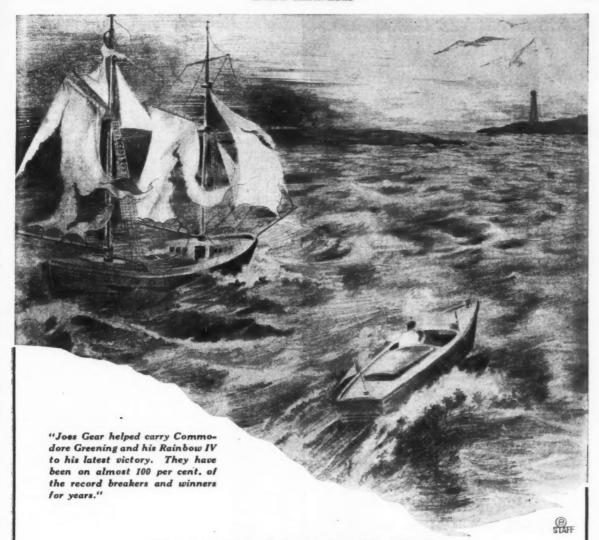
Sec. 4. Notices of stated and special meetings shall be mailed to every member at least five days in advance thereof, and shall be posted by the Secretary for the same length of time on the Club House bulletin.

Sec. 5. No business shall be transacted at a special meeting except that of what notice was given.

(Continued on page 98)

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#### Topsails Tattered, She Can Weather It, but a Busted Reverse Gear is Hopeless.

It makes no difference what your craft may be-commercial-pleasure or speed-its dependability is governed, to a great extent, by its transmission. Only gears that are absolutely dependable under any condition are good enough.

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#### Reviving the Yacht Club

(Continued from page 96)

Article XII. DISCIPLINE.

Any member or members having a complaint against another member for the infraction of any law or rule, other than sailing rules, or for conduct injurious to the welfare of than sailing rules, or for conduct injurious to the welfare of the Club, may report the same, in writing, to the Board of Trustees. Such complaint shall set forth the facts of the case, together with the names of witnesses, if any. After receiving such complaint, a meeting of the Board of Trustees shall be held as soon as practicable to investigate the same. Of such meeting, the complainant or complainants, and the member complained of, shall receive at least five days' notice, and may be heard with their witnesses. The statements and evidence shall be reduced to writing and filed with the Secretary. The Trustees shall have power to suspend or expel a member thus complained of, or impose other penalty. The decision of the Trustees shall be filed with the Secretary, and he shall mail copies thereof to the complainant or complain he shall mail copies thereof to the complainant or complainants, and to the member complained of. An appeal from the decision of the Trustees may be taken to the Club within five days thereafter, by serving upon the Secretary a written notice of such appeal. A special meeting shall thereupon be called for the consideration of the case, and a two-thirds vote shall be necessary to reverse the decision of the Board of

#### Article XIII.

FEES AND DUES.

Sec. 1. The initiation fee shall be fifty dollars. Sec. 2. The annual dues shall be thirty dollars, payable semi-annually, in advance, on the first days of January and

Officers of the United States Army, Navy or Revenue Cutter Service elected to membership shall pay an initiation fee of twenty-five dollars, and they shall be exempt from the payment of annual dues so long as they remain in either branch of the United States Service.

#### Article XIV. PERMANENT FUND.

All initiation fees hereafter received shall be placed to the credit of a fund to be called the "Permanent Fund." Said fund shall be accumulated for the express purpose of providfund shall be accumulated for the express purpose of providing for the preservation of the Club as an organization. No part of this fund or the income derived therefrom shall be appropriated for any purpose unless agreed to by resolution passed by a three-fourths vote of the Board of Trustees. Said fund shall not be withdrawn except by check signed by two officers designated by the Board of Trustees.

The said initiation fees shall be deposited monthly by the Treasurer in a Trust Company to be designated as depository by the Board of Trustees of the Club to be held or invested as hereinafter provided.

as hereinafter provided.

The "Permanent Fund" of the Club may, at the discretion of the Board of Trustees, be invested in such class of mortgages or securities as are designated by the State of New York as suitable for investment by savings banks.

#### Article XV. AMENDMENTS.

The Constitution may be amended at any meeting of the Club, by a two-thirds vote of all present, provided the proposed amendment has been recommended by the Board of Trustees or approved in writing by fifteen members in good standing, and a copy thereof has been mailed to every member at least ten days in advance of such meeting.

#### BY-LAWS

Article I. NOTICES.

Notices shall be sent to every active member of all meetings of the Club at least five days prior thereto. Notices of special meetings shall state the purpose for which they are called, and no other business shall be in order at such meeting.

#### Article II.

ORDER OF BUSINESS.

At a regular meeting the following order of business shall be observed:

- Roll Call. 1.
- Reading of the minutes of the previous meeting.
  Reports of Officers.
  Reports of Committees.
  Unfinished Business.
- 3.
- 4.
- Miscellaneous Business.
  - Election of Officers. (Continued on page 102)

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As you read Lewis R. Freeman's gripping story, "By Waterways to Gotham," in this issue of Motor Boating, remember it was Elto—the Fast Light Twin Outboard Motor that alone drove his 18-ft. skiff those 2,000 thrilling miles "from Milwaukee to the Sea."

# A Heaping Measure of Both Yet the New ELTO Weighs So Little

See the New Elto in action and you, too, will enthuse over its remarkable performance. On the water this smooth silent Twin unfolds a driving power that astonishes—a speed that thrills. No wonder Elto owners are surprised and delighted with the heaping measure of power and speed which every Elto gives.

#### See What Elto Owners Say of ELTO'S SPEED

Winner over Eight Other Entries

Winner over Eight Other Entries
"On July 11th and July 12th, 1925, my
son who is 14 years of age won the Oneida
Lake Championship for Outboard Motors
against the field of eight other boat."
William E. Sembach, Syracuse, N. Y.
Outdistances 25-ft. Motor Boat
"The Elto has exceeded all my expectations as to performance, appearance and
usefulness. It certainly seems to be the
'fastest light twin' on the water. I now
can go faster than our twenty-five foot
motor boat. Evill go by a — motor with
greatest ease, which I proved the other
day." Wm. E. Putnam, East Harpswell, Me
Ly's a Favorite with the Guides

It's a Favorite with the Guides

It's a Favorite with the Guides
"I am a Guide and there are three Resorts on this lake and two on Teal Lake,
and every guide has a motor, seven different makes in all. But there is not a motor
that will keep up with ELTO in a heavy
sea or towing another boat, which we
do a great deal.

"The weather is getting quite cold now
and the boys all envy me when they have
to pull a starting cord eight or ten times
before they get started, while I am off at
the first turn of the fly-wheel.
"A great many have told me that their
next motor will be an ELTO. I cannot
speak too highly of your motor and I am
in a position to see all makes of motors
operated every day, and believe me we
guides use our motors seven days a week."

J. M. Hopgood, Hayward, Wis.

"Elto Passed Every Other Boat

"Elto Passed Every Other Boat On the River"

On the River?

"I can make from 6 to 8 miles an hour against heavy current, with my big 20 ft. boat of ft. beam) and with four people in the boat at that.

"Show me another outboard motor of the same size that can do that. I'll say they can't do it, and I am ready to back up what I say with a bet any time. I passed every boat on the river since I had it. Steam boats, ferry boats, motor boats and all. And with all the motoring I have done, I have not had one moment's trouble with it."

H.D. Veidt, Stanton, N. Dak.

30 Entries—

30 Entries Elto Takes 1st and 2nd Places

"Our camping association had an an-rual regatta and among the events was a motor boat race of about thirty motors. The two leaders were Eltos. Hoping this would interest you." I am, Frank H. Sackett, Springfield, Mass.





Designed and Built by Ole Evinrude

#### See What Elto Owners Say of ELTO'S POWER

#### How's this for Power?

"We gave the Elto a real test by tying three boats side by side, two of the boats were heavy, hard running boats, the other was a small boat—two men in each of the outside boats—three men in the center boat, on which the motor was atrached.
"We went about eight mice fighting a very swift current, and we moved right along."

Of Oler Wangbulg Ele

O. G. Oler, Wauchula, Fla.

#### Has Power and Speed Like No Other Motor

"I recently purchased one of your Elto Twins and I can't say enough for it, it has power and speed like no other motor on the river. I have even passed a boar powered with a 4 horsepower motor."

L J. Steiger, Weyauwega, Wis.

#### The Joke Was on the "Natives"

"Some time ago I purchased from the Captain of a United States Shipping Board steamer, a lifeboat which has been part of the equipment of an ocean steamer and which was picked up in the Pacific Ocean. It is a big heavy boat, 16 ft. long and 5½ ft. beam and of very heavy construction, and will comfortably carry fifteen persons.

and will comfortably carry fifteen persons.
"I bought one of your type "B" motors to use on this boat, and when we took the boat out to the little Wisconsin lake where we expected to use it, all the natives thought it was a joke to expect this little motor to push such a heavy boat.

"The tail-board had to be cut down.
"The tail-board had to be cut down surprised to find that your little motor kicks this heavy boat along at just as high speed as most of the flat bottom boats of much lighter construction.
"The motor is giving excellent satisfac-

"The motor is giving excellent satisfac-tion, and I am writing this for the benefit of those who might be skeptical about getting good results with your motor when used on a very beavy boat."

H. M. Stratton, Milwaukee, Wis.

#### "Elto's Power Can't be Beat"

"When it comes to power, Elto can't be beat. We were able to push an 18 foot boat against the tide and current of the Klamath tiver when loaded down with as many as 6 people."
Chas. L. Bean, San Jose, Calif.



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One of these popular Model B 32-40 H.P. THOROBREDS powers the runsbout "DART" plctured above. This unit powerplant has bore of '%" with stroke of 8", and is the ideal engine for the substantial runsbout or medium sized cruiser.

Month after month in MoToR BoatinG we have been picturing Red Wing powered boats that give their owners speed, reliability and complete satisfaction. A gifted writer could, no doubt, paint more glowing word pictures about THOROBRED performance, but we consider that satisfied owners and actual facts concerning their boats are the best testimonials for Red Wing engines, and the kind you prefer to read about. If you want this same kind of marine engine satisfaction, we will be glad to recommend the right size and type Red Wing for your particular boat. A card will bring complete details. Why not write us today?

#### 9 Throbred Sizes from 4 to 90 H. P.

Model K4-5 h.p., 3¾x4¾", 1 cyl.

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Model D10-14 h.p., 2¾x4", 4 cyl.

Model B2-36 h.p., 3¾x4¾", 4 cyl.

Model B2-36 h.p., 41-16x5", 4 cyl.

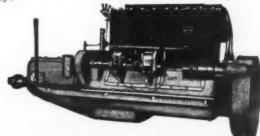
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Medium Heavy Duty or High Speed Types



The four cylinder, four cycle Big Chief Special 75-90 H.P. THOROBRED which drives the Darinell at 12 M.P.H. cruising speed. Motor has 2%" five bearing crank shaft, built-in Paragon gear, pressure feed lubrication, double ignition, hot spot manifold and two unit, well-e vols starting system with fiveheel housing. (Note: Else cylinder sises of both 5"x1" and 5%"x7" lig Chiefs available about Jan. 184.

Complete Catalog on Request-Mention Size of Boat

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Eastern Distributors: W. H. Moreton Corp., 780 Commonwealth Ave., Boston, Mass.—Verrier Eddy Co., 222 E. 42nd St., New York City.—W. E. Gochenaur Mig. Co., 631 Arch St., Philadelphia, Pa.—Hutchinson's Boat Works, Alexandria Bay, N. Y.—F. B. Eisenbrandt, Foot of Light St., Baltimore, Md.—Gas Engine & Boat Corp., First St., near Front, Norfolk, Va.



Article III.

RULES OF ORDER

Sect. 1. When a question is before the meeting no motion shall be entertained except:

1. To adjourn.

2. To lay on the

3. The previous question.

To postpone.

To amend.

Which several motions shall have precedence in the order above given, and the first three shall be decided without de-

Sec. 2. If any two members shall request, the yeas and nays shall be called upon any question, whereupon each member present shall vote as his name is called, without debate, unless excused from voting by the meeting, and the vote so taken shall be recorded in the minutes.

Sec. 3. A motion to reconsider must be made by a member who voted with the majority and at the same or such

ber who voted with the majority, and at the same or succeeding meeting.
Sec. 4. Except as otherwise provided, all questions shall

be determined by a majority vote.

The Chairman shall have the casting vote in case of a tie, except when the yeas and nays are ordered, in which case he shall vote when his name is called. If the result be then a tie the motion shall be declared lost. Sec. 5. All questions of parliamentary practice not herein

provided for shall be determined in accordance with Cushing's Manual.

Article IV

BURGEE, FLAGS, NIGHT SIGNAL.

Sec. 1. The Burgee of the Club shall be a pointed flag. The length to be one and one-half the hoist. The device shall be a white triangle at the head of flag, the point of same to come one-half the length of flag, all on a red ground. In center of white triangle shall be a large five-pointed blue star, pointing upward, and in the red ground shall be a five-pointed white star, pointing toward tail of flag, point of same two-thirds the distance from head of flag.

Sec. 2. The Commodore's Flag shall be blue, rectangular, with a foul anchor in white surrounded by thirteen white

with a foul anchor in white, surrounded by thirteen white

five-pointed stars.

Sec. 3. The Vice-Commodore's Flag shall be red, rectangular, with a foul anchor in white, surrounded by

thirteen white five-pointed stars.
Sec. 4. The Rear-Commodore's Flag shall be white. rectangular, with a foul anchor in red, surrounded by thirteen

rectangular, with a foul anchor in red, surrounded by thirteen red five-pointed stars.

Sec. 5. The Fleet Captain's Flag shall be white, rectangular, with a blue foul anchor.

Sec. 6. Race Committee Flag shall be rectangular, with a red vertical anchor, supported by the two letters R. C. in white on a blue field.

Sec. 7. Night Signal. The distinguishing night signal of the Club shall be reduggeen, red white to be shown in such

Sec. 7. Night Signal. The distinguishing night signal of the Club shall be red-green-red-white, to be shown in succession by Coston light or other practical means.

Article V.

UNIFORMS.

UNIFORMS.

SERVICE DRESS.—Double-breasted sack coat of blue or white cloth, serge or flannel; blue or white waistcoat, each with the Club button—black buttons on blue, and gilt buttons on white; trousers of the same material as coat, or of white.

MESS JACKET.—(Full dress)—to be regulation.

CAP.—To be regulation.

BUTTONS.—Shall be of two kinds, gilt and black, bearing, as a device, a foul anchor, surrounded by the circular inscription "Columbia Yacht Club, N. Y." for the large size; the small button to have the "N. Y." in center in place of anchor. anchor.

Uniforms for Officers of the Deck, Seamen, etc., to be regulation.

CAP DEVICES. For Commodore.—Two crossed foul anchors, one and three-eights inches in length, with flukes down, embroidered three-eights inches in length, with flukes down, embroidered in gold; at their intersection a raised disc, five-eights of an inch in diameter, showing the Burgee on a blue ground,—enamelled on metal, the disc surrounded by a narrow gold bullion and a gold star one-half inch in diameter at each end of, and one above the device, with a space of three-six-teenths of an inch between the device and stars, to be worn

on the band.
For Vice-Commodore.—Same as for Commodore, omitting

For Vice-Commodore.—Same as for Commodore, officens the star above, the stars at each end to be of silver. For Rear-Commodore.—Same as for Commodore, omitting the stars at each end, the star above device to be of silver. For Captains and Ex-Flag Officers.—Same as for Commodore, omitting stars. (Continued on page 104)



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Savannah's fresh water land-locked harbor on the South bank of the Savannah River, a few miles from the sea, always has a representative gathering of yachts, cruisers and those little boats built for speed that sail the warm waters of a Southern winter.

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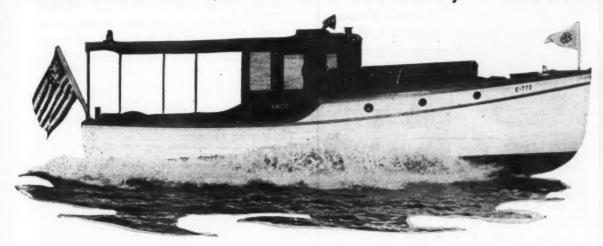
WRITE today for full details and price of this wonderful craft, a twenty-footer, beam 5' 10", draft 15". Engine under forward deck, liberal size hatch gives access to Model "Z" Gray engine, equipped with starter, generator and reverse gear. Speed, sixteen miles.

28-ft. Florida Fishing Cruiser-Write for details AGENTS WANTED

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RED BANK

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#### A More Serviceable Boat For Florida Is Not Built

THE RED BANK thirty-foot cruiser is definitely established in the good opinion of yachtsmen everywhere as a boat of outstanding and enduring worth. It is a boat of great staunchness and unusual seaworthiness, a real sea boat and excellent boat for deep sea fishing. The advantages of a runabout are combined with the protection and accommodations of a cruiser in this thirty-footer. It is easy to handle and economical to run. The cabin is large and completely equipped with every convenience and handsomely finished. Not until you have learned more about this wonderful boat can you really appreciate its good qualities and rare value.

Complete Hull ........\$4,500 Twenty-two miles per hour....\$7,500 Fifteen Miles per Hour.....\$5,850 Twenty-seven miles per hour... 7,900

Write today for full details

#### Important Notice

Due to the volume of orders for RED BANK cruisers now on hand, and the limited time in which to build them, we will be unable to exhibit any of our boats at the Annual Motor Boat Show in New York, January 22nd to 30th. Interested clients will be agreeably received at our factory, seventy minutes from New York, where boats, both completed and under construction can be seen.

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"MALABAR VI" "DORESS" "MATINICUS" "NOR'EASTER"

October 28, 1925.

#### Gentlemen:

Enclosed find list of some of the yachts built this year from my plans, on which your products were specified and used as well as on my own yachts for the past two years.

These products have been so satisfactory in both finish and wearing qualities, that I shall continue to both use and specify same.

Yours very truly,

(Signed) JOHN G. ALDEN.

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#### **Money Saving Prices**

Life Preserv	ers	Pi	llo	Ws	-	-	-		\$1.00
Comb Lamp	CI	ass	1	-	-	-		-	2.10
Stern Light	-	-	-	-			-	-	1.50
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stamps it as a genuine Bosch Product-backed by the Bosch guarantee of dependable service.



American Bosch Magneto Corporation Springfield, Mass., U. S. A.

#### Reviving the Yacht Club

(Continued from page 102)

For Fleet Captains.—Same as for Captain, with an anchor in gold, one-half inch long, placed above device and placed horizontal.

horizontal.

For Secretary.—Same as for Fleet Captain, substituting for anchor, a maple leaf in gold.

For Treasurer.—Same as for Fleet Captain, substituting for anchor, an acorn in gold.

For Fleet Surgeon.—Same as for Fleet Captain, substituting for anchor, a right angle red cross, with arms of equal length, one arm vertical.

For Measurer.—Same as for Fleet Captain, substituting for anchor, a gold bar, placed horizontal.

For Race Committee.—Same as for Fleet Captain, substituting for anchor, a foul anchor in gold, one-half inch long, placed above device and placed vertical.

For Mooring Committee.—Same as for Captain, with an anchor in gold, one-half inch long, vertical, enclosed in circle,

anchor in gold, one-half inch long, vertical, enclosed in circle, placed above device.

For Members.—Same as for Captain, omitting one anchor,

the remaining anchor to be vertical.

CLUB RIBBON.

Shall be one and one-half inches wide, of moire silk, the middle stripe to be of vermilion, one inch wide, flanked on each side by stripes of white and navy blue, each one-sixteenth inch wide, the blue being at the outside edges.

DESIGNATION OF RANK.

The designation of rank shall be worn on the sleeve of all

Black on blue clothes; white on white clothes.

By the Commodore.—Five stripes of heavy mohair tubular braid, three-eights of an inch wide, the first placed two

lar braid, three-eights of an inch wide, the first placed two inches from end of cuff; the others above, and one-quarter of an inch apart, the upper stripes ending in a described trefoil on the upper side of the sleeve; three gilt stars, placed one in the center of each loop of the trefoil, on each sleeve.

By the Vice-Commodore.—Four stripes as above. Two gilt stars placed one in the centre of each of the lower loops of the trefoil. the trefoil

By the Rear-Commodore.—Three stripes as above. One gilt star placed in the center of the upper loop of the trefoil.

By Captains, the Secretary, Treasurer, Measurer, Fleet Surgeon, Fleet Captain and Race Committee.—Two stripes

as above, with trefoil.

By Members.—One stripe as above, with the trefoil.

By Ex-Flag Officers.—Ex-Flag Officers shall be entitled to wear on the sleeve the designation of their rank, but without the stars.

Article VI. YACHT SQUADRON. Sec. 1.—Yachts owned wholly or in part by a member of the Club shall become enrolled in the squadron upon filing with the Secretary a description thereof, stating the name, ownership, dimensions and rig, and when known, the name of the builder. Sec. 2.

Sec. 2.—A member using a yacht not enrolled in the squadron shall not fly the Club Burgee unless by permission of the Commodore obtained in writing.

Article VII.

REGATTA. There shall be an annual regatta in the month of June, un-less suspended by the Board of Trustees upon recommendation

by the Race Committee.

Article VIII.

CARE OF YACHTS.

Members shall be responsible for the proper mooring of their yachts, and neither the Club nor its employees shall be responsible for any damage which may occur from the slipping, breaking away from or dragging their anchor, but in case of accident reasonable effort will be made to protect the property of the members. of the members.

Article IX.
USE OF DOCKS AND FLOATS.

USE OF DOCKS AND FLOATS.

No yacht shall be permitted at any time to lie to at the Club docks or floats for a longer period than is absolutely necessary for the purpose of embarking or disembarking guests, or for the taking on or off of stores or water.

Article X.

GUNS AND COLORS.

A gun for colors shall be fired at the Club House at 8 A. M., and at sunset every day while the Club is in commission, excepting Sundays, and all yachts shall take the time from the Club gun. No gun shall be fired on Sunday for any purpose.

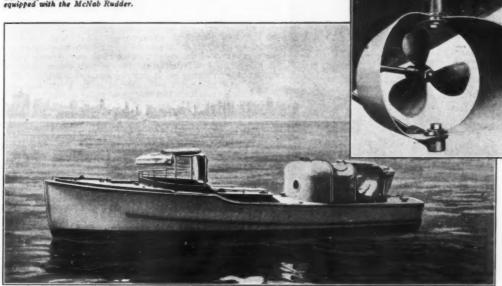
Article XI.

AMENDMENTS AND SUSPENSIONS.

These By-Laws, or any of them, may be suspended at any meeting, but for such meeting only, by consent of four-fifths of the members present, and may be amended or repealed by a vote of two-thirds of the members present at any meeting.

## U.S. Navy Test Results

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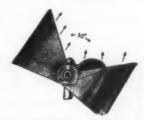


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#### By Waterways to Gotham

(Continued from page 30)

ramshackle structure was about to be tossed if not heavenward on the horns of a wild bull of a tornado. I shamelessly turned tail on bed and boat and bolted for terra firma. My bowed head butted almost as thwackingly against the wind as upon some part of the frame of the broken door, and my heart went into my mouth as a lightning flash revealed the upper air peppered thickly with fragments of wreckage, whirling like autumn leaves.

Reassurance came with the realization that the stone jetty was still on an even keel and the discovery of the fact that the aspiring whirl of storm-tossed wood was principally composed of light and comparatively innocuous shingles from the ancient sawmill. My oozing courage ebbed back quickly enough once I was clear of the primal chaos inside the shattered warehouse, but it was not equal to going out on the exposed end of what I still believed to be a wrecked wharf until Captain McKay and his crew came down to lead the way with a lantern.

Admitting that it was "a nasty bit of a blow," the veteran Scotch fisherman said that he had known the old wharf to weather many another just as bad and that he had no great fear for the safety of his tug.

Although the prevailing gusts appeared to be coming from the south across the island, there was a heavy sea running in from the bay. Water from waves pounding under the warehouse dashed about our knees as we pushed through across the bulging planking. This was nothing, however, to the solid green water that was washing right over the top of the open wharf beyond. The hump of the hard-running waves was broken every few feet by a jet shot up through the hole where a plank was missing. This, with the blinding spray, made night navigation difficult. McKay and his French-Canadians, broken to reeling decks, seemed to manage to stumble on more or less upright; my own progress was largely on hands and knees.

Reinforced again and again through the years, the old wharf was an almost solid mass of timbers, both above and below water. This formed a fairly well protected lee as long as the structure stood. McKay's big tug, skillfully and heavily moored, proved to be riding quite comfortably. A smaller launch, against which my own boat was secured, appeared to be about to break away, however. As this would have meant the almost instant destruction of both craft as soon as they drifted out of the lee of the wharf, there was nothing for me to do but to cast off and try to find a better berth before the odds became prohibitive.

While McKay and his men worked to secure the launch, I reefed the canvas cover of my boat, shipped the oars and stood-by to run for the shore as soon as the lantern could be spared to find a landing place. It is always awkward working in the dark in a banging boat, and here there was no end of a mess due to the fact that the water dashing over the top of the wharf threatened to swamp the boat as the protecting canvas cover was rolled back to give rowing room.

Fortunately McKay was ready to cast me off before the menace from the flood became serious. My painter parted even as they let it go, while the stern-line, as I discovered later, had chafed down to its last strand. My pounding boat would have been adrift on its own in another five minutes.

would have been adrift on its own in another five minutes. As soon as the lantern twinkled landward, I swung the boat's nose in line with it and headed toward what I dimly recalled as a bank built out from the sawmill with slabs and sawdust. The wind got under the loosely furled hood as I passed out of the lee of the wharf and, billowing it into a yawing balloon of canvas, drove the boat as a wild wallow before it. The best I could do was to hold the stern to the wind and keep from striking beam-on.

before it. The best I could do was to noid the stern to the wind and keep from striking beam-on.

With headway unchecked, the bow hit the crumbling wall with the force of a battering ram. Already undermined by the pounding waves, the overhanging mass of rotten wood gave way at the blow and caved down to bury the bow all the way back to the spray-hood. This released an ancient pocket of dry dirt and sawdust which, caught by the wind, was whirled about in a blinding shower. Although the humor of it escaped me at the time, it was really rather funny, that getting all dirty at a moment the air was almost solid with driving spray.

With its nose held in a vise by the cave-in, the stern could

With its nose held in a vise by the cave-in, the stern could not rise to the waves, and so there was nothing to prevent the water driving in and filling most of the boat not already choked with debris. My poor little Elto was, of course, completely submerged. Flying water laid the dust quickly; indeed, it took a hard-flipped wave crest effectually to clear

(Continued on page 110)

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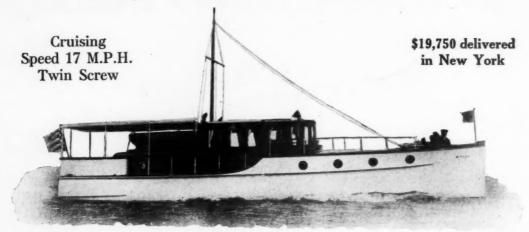
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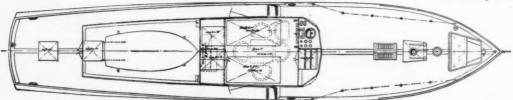
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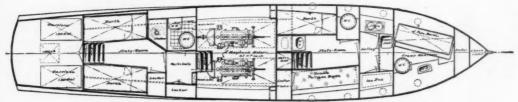


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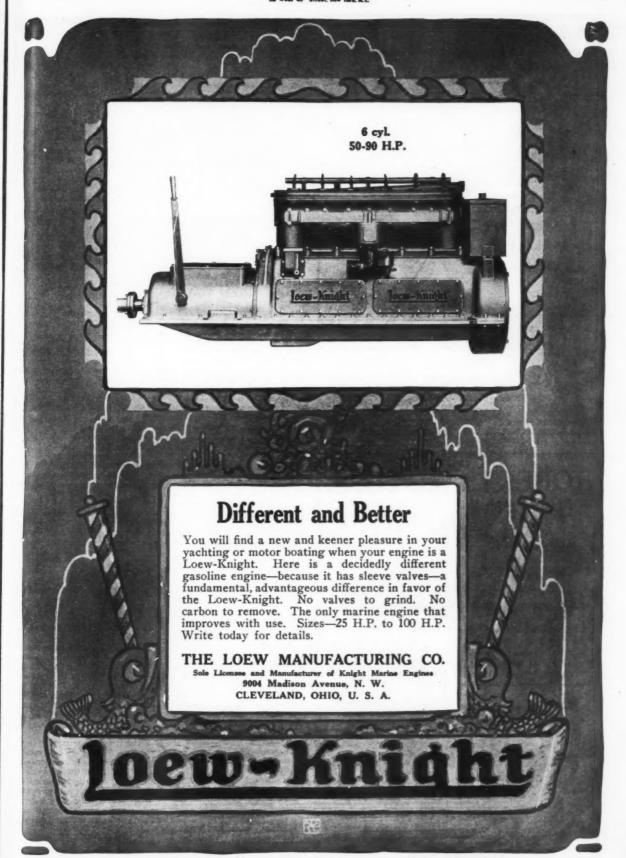
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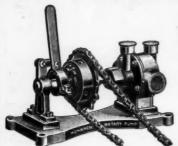


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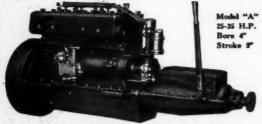
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#### By Waterways to Gotham

(Continued from page 106) my eyes and allow me to orientate sufficiently to abandon ship to landward rather than lakeward.

McKay and his men were already burrowing down to the buried bow as I clambered out beside them, and once a place to stand was cleared it was the matter of but a few moments to work the boat above the rotten slabs and drag it back away from the encroaching waves. Dumping out the worst of the dirt and water, we made fast the canvas cover again

of the dirt and water, and left her for the night.

A half hour's further work on the wharf did all that was the launch and tug. Then, on Captain McKay's A half hour's further work on the possible for the launch and tug. Then, on Captain McKay's invitation, I carried my wet bed over to the bunk-house occupied by his crew and turned in under a tight roof after the last I remember the pages and page was the spatter of blown spray on the windward panes and old Bateeste, the mate of the tug, trying to play a mouth organ and recite "Ze night was black like one black cat" at the same time.

same time.

Some time before morning a change came over the spirit of the weather. Daylight found it still stormy, but the cyclonic conditions had given way to a hard but not violent northerly gale. The harbor was scarred with irregular lines of converging seas, while the open North Channel was beaten white to the broken horizon. With an empty lake proving that even steamers were keeping port, pushing on with my own frail shallop was not to be considered.

Captain McKay expressed the opinion that the heavy storm of the night was a far-flung kick of a great tornado, the center of which—if the cloud formations of the previous afternoon could be trusted—was far to the south. That this diagnosis was substantially correct I was to learn several days later at Little Current, where the Toronto papers told of a cyclone, at its worst on Lake Erie and northern Ohio, which had destroyed many millions of dollars worth of propwhich had destroyed many millions of dollars worth of property and between two and three hundred lives. It was rated as by far the most destructive Great Lakes storm of recent

For the next three days the gale continued with little abatement. With my boat safe on the shore, I continued to sleep at Captain McKay's bunkhouse and explore still further the inexhaustible resources of Polly Pateman's table. By way of diversion I took a couple of long walks across the island and went out once to help protect Long Jim from the attacks of a big moose which he said frequented a remote patch of woods he desired to cruise for cedar. Moose were particularly sayage during partietly gales according to him particularly savage during northerly gales, according to Jim, and he didn't want to take undue chances of being surprised.

Fortunately, we were not molested.

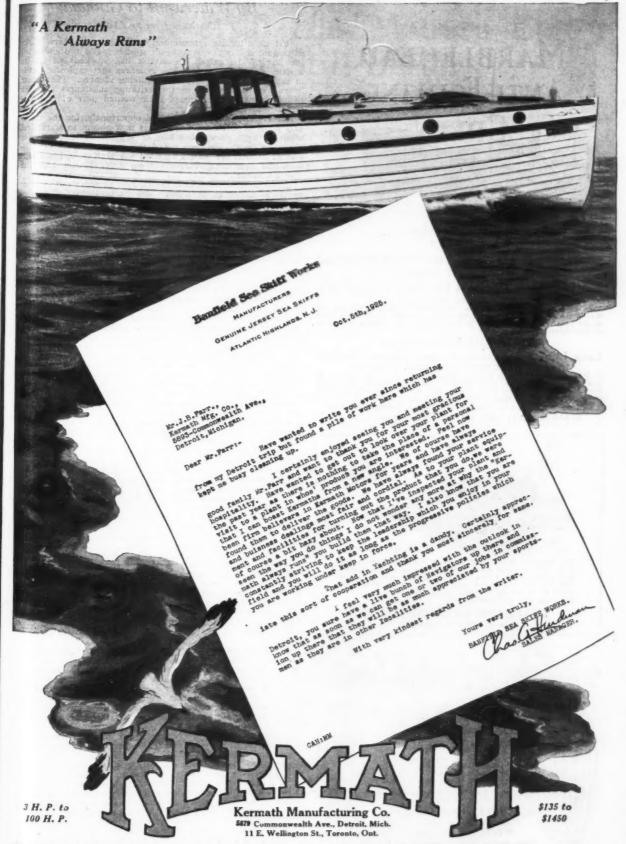
By July 1st, Dominion Day, the gale had blown itself out. The outer lake was free of white-caps for the first time since my arrival, four days previously. With thunder clouds massing to south and west, however, Captain McKay recommended that I hang on until afternoon and await developments. ments. The passage between Cockburn and Manitoulin Islands was a notoriously treacherous bit of water and no chances should be taken in crossing it. So I went with the veteran in his tug to lift his neglected nets, untouched for several days on account of bad weather. Lifts of whitefish and lake trout aggregating over a ton in weight, and worth at current prices nearly five hundred dollars, more than com-pensated for nets badly torn by waves and driftwood. With anything like reasonable luck, the consistent fisherman of

the northern lakes is in line for substantial profits.

The clouds were still rearing ominous fronts when we came back to the wharf, but as there appeared to be no came back to the wharf, but as there appeared to be no probability of their making any punitive movements before the end of the afternoon, Captain McKay thought it would be best to push off as quickly as possible and get across to Manitoulin while the going was good. There were many harbors along the north coast of this hundred-mile-long island, he said, with occasional smaller islands not far off shore. At the worst, I could dodge along from shelter to shelter between storms if the weather continued bad.

Launching and loading the boat and working the dirt and water out of my abused engine took until three o'clock, when most of the population of the pretty little village came down to speed me on my way. Polly and Long Jim both brought characteristic contributions. Polly's offering was a two-quart can of wild strawberries and cream; that of Jim a bi-product of an attack made upon him by a five-prong buck—"a hellish

of an attack made upon him by a five-prong buck—"a hellish vicious brute"—while he was on his way to cruise for railroad sleeper timber. And so farewell to Cockburn Island and out into the lake. I had halted there four days. With the names of the most of the people in my mind and some knowledge of the joys and sorrows of not a few, it was as though I had been there as many years. been there as many years.
(Continued on page 112)



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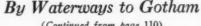
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(Continued from page 110)

Just as after its ignominious soaking in northern Lake Michigan, my engine was again splenetic and profane until which and the last of the extraneous matter had worked out of its system. For a mile or two the cylinders spat explosive oaths at each other between spells of sulking silences. Then their lungs were cleared off of the irritating substances and the temperamental pair resumed their wonted purr of contentment.

Peace and power were restored opportunely, for the west-erly point of Cockburn Island was now abeam to starboard, with the high, dark green hills of Manitoulin looming over the same bow. Between rolled the somber depths of Mis-sissagi Straits, the waters agitated (as McKay had warned) with the conflicting currents from Lake Huron and the North Channel.

Under normal conditions the current of the strait is from Under normal conditions the current of the strait is from north to south, as in Detour and False Detour Passages, the three carrying to Huron most of the water draining from Superior by the Sault Ste. Marie. Today, however, doubtless due to the great storm which had swept the lakes to the south, a heavy swell and current were setting north from Huron, to meet, at the North Channel entrance of Mississagi Strait, a counter sea and current driven by a stiff breeze from the opposite direction. By an unfortunate chance, the battle ground of the opposing forces was directly across the only course which I could steer to reach the north coast of Manitoulin Island. coast of Manitoulin Island.

coast of Manitoulin Island.

That was a lively passage from the outset, with a promise of becoming more so every moment as the thunder clouds banked higher in the northwest with their threat of throwing reinforcements and heavy artillery into a contest which was already waxing rougher than at least one inadvertent member of it had any desire for. For a mile out into the North Channel from the mouth of the strait the surface of the water was just one glorified tidal-rip—waves wallowing without rhythm or responsibility, wrangling savagely to see which could climb upon its neighbor's back or knock his feet out from under him. None of them seemed really to hold any grudge against the boat itself; at seemed really to hold any grudge against the boat itself; at the same time they had no compunction about trampling it under foot if thereby they could grapple at each other's throats the readier. That made distinctly bad going, espe-

it would have eased the situation materially to have been able to throttle down and run under a slowed engine, but this I was afraid to do, except as a last resort, for fear of being carried into the open strait with the imminent breaking of the northerly squall. And so I barged along as best ing of the northerly squall. And so I barged along as best I could, taking water impartially over bow, stern and both sides and getting rid of it in intermittent fits of activity with the bailing bucket. I was frankly and unfeignedly relieved when the wooded heights of Meldrum Point, the northwesterly extremity of Manitoulin Island, interposed to cut off the wind-piled tide from the main lake and put an end to the tossings of the infernal rip off Mississagi Strait.

I now had the alternative of running in past Brittomart Point and seeking shelter in deeply indented Meldrum Bay or standing on along the porth coast of Manitoulin as long

Point and seeking shelter in deeply indented Meldrum Bay or standing on along the north coast of Manitoulin as long as weather and daylight permitted. With the menace of the open strait removed, I plumped for the latter course. The bay would be on my lee in any event, and if the squall broke I had only to turn and run before it until a protecting cove was reached. It was quite a safe and conservative plan—in theory.

As though aware of my strategy, the generalissimo of the advancing cloud phalanxes coolly held his legions in leash until I had scudded almost all the way across the four-milewide entrance of the bay. Then, with only a tumble of rocky coast to leeward on the bay side of Point Chamberlain, he opened up with all his guns. With landing quite out of the question along any of the shore in sight, there was nothing to do but to stand on round the point and hope for something better beyond.

better beyond.

A good deal of action was crowded into the next twenty minutes. With the wind and seas on my port beam, it was a rough-and-rowdy fight all the way to the point. The chart had warned me of a long lakeward reef off Chamberlain and I had tried to lay a course far enough out to give the end of it a safe berth. Due, doubtless, to a greater leeway than I had allowed for, I found myself driving straight into a long patch of breaking waters masking the shoals beyond the end of the point. To avoid this I had to turn right out and head into the teeth of the blustering squall.

Water came in faster than I could get rid of it for a few minutes, but I made up for lost time with the bailing bucket (Continued on page 114)

(Continued on page 114)

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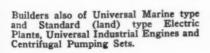
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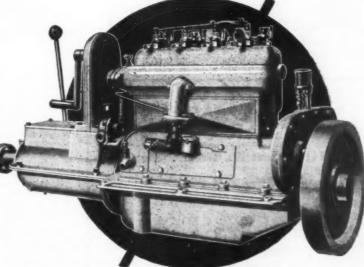
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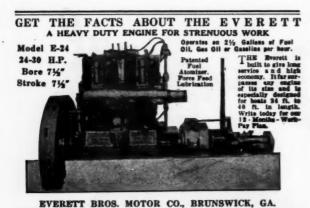












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#### By Waterways to Gotham

Gontinued from page 112)
once I was round the point and headed back toward shore.
With the wind on my port quarter, and finally dead astern, the spray-hood acted as a sail and the boat drove in as a clip which quickly carried it to the outermost line of rapidly mounting breakers pounding along the rocky shore.

As the boat was still taking water faster than I could throw it overboard, the only thing left to do was to attempt a landing before it swamped. With the center of the squall not over a mile away, there was now no time to coast along for a more favorable spot. Although the shore was less abrupt than on the other side of the point, nothing like a sheltered cove appeared to open up within eyescope in either direction. Nor was there anything even suggesting a sandy beach in sight. The shore was a series of sandstone ledges covered with slabs and fragments of loose rock. The broken character of the surf indicated that deep water alternated with shoals, with rocks peppered thickly all along the inner lines near the beach. lines near the beach.

Taught by my experience on the north coast of Lake Michigan the utter impossibility of running a heavy surf with a boat of low freeboard without swamping, I had already given some thought as to how to manage at the next emergency. Tilting the engine and backing in slowly had emergency. Tilting the engine and backing in slowly had seemed the most promising plan to follow, a system somewhat comparable to that we had used in running the rapids of the Grand Canyon of the Colorado the previous summer. This, I reckoned, would not only give an opportunity for better observation, would also minimize the chance of swamping through presenting the decked over bow rather than the open stern to the inrushing waves

swamping through presenting the decked over bow rather than the open stern to the inrushing waves.

With one place looking as bad as another for rocks, I simply let the boat drift on as it was driving before the waves, trusting to luck and hard-plied oars to avoid obstacles as they developed. We rode the outer lines of surf very buoyantly, taking but little water. I had no trouble in keeping the bow to the rollers in deep water, but when I had to check beach and any locatorisely to travel drive. had to check headway and pull quarteringly to prevent driv-ing onto a half uncovered shoal it was touch-and-go to keep

from being swung broadside.

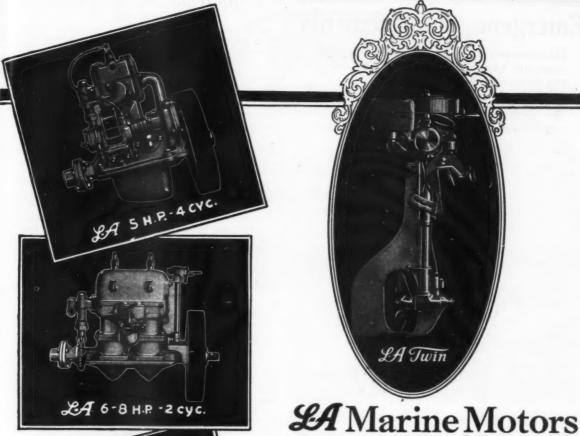
This happened three times, with the last a really near squeeze from being turned and rolled broadside across a patch of barely submerged rocks. Snapping off an oar by throwing too much weight on it, a second was shipped barely in time to swing the bow back to meet the next wave. Then I nipped into the lee inside of the rock-patch and had quieter going in to where the half-spent breakers were throwing their dying efforts against the ledges which formed the shore.

Heading for the broadest break in the rocky shelf, I backed Heading for the broadest break in the rocky shelf, I backed slowly in, checking the stern-way of the boat to minimize the force of its final impact. Rolling out as the shoaling water put an end to the usefulness of the oars, I grasped the starboard gunwale and ran the lighted boat inward until, lifting with a wave, it came down and grounded solidly on the rock. Steadying it here until two or three more breakers had spent themselves harmlessly over the bow, I unclamped the engine and, watching for a favorable opportunity between waves, ran in and deposited it on the shore. Gasoline, grub-boxes and bed-roll followed, after which I was able to drag the boat in another ten feet. Here, with the stern out of water and the bow barely splashed by the the stern out of water and the bow barely splashed by the expiring breakers, I wedged it on an even keel with logs and left it secure against anything but the banging of a pro-

tracted norther.

I was no more pleased over getting out of what was becoming an uncomfortable situation than I was over having coming an uncomfortable situation than I was over having worked out a plan by which I could land my fifteen hundred pounds and more of boat, engine and outfit single-handed through the breakers on a rocky shore with comparative ease and safety. The miserable mess-up of my landing on the north shore of Lake Michigan need not, I told myself, be repeated if only I used reasonable judgment in getting started shoreward in time and had reasonable luck in the matter of unforcesable contingencies. Not a little of my matter of unforeseeable contingencies. Not a little of my lost confidence came surging back again, but not enough, fortunately, to set me tempting Providence again by taking undue chances.

It was not until all had been made snug with the boat for the night and the last of the squall had gone thundering down the leeward that I discovered that my haphazard landing had brought me right into the heart of a veritable sylvan paradise. The forest front was a line of budding birches that might have been lifted bodily from the canvas of a Côrot or Diaz. Under the trees was a dewy greensward carpeted thick with full blossoming daisies. Farther back was a bank of sombre cedars, almost making a cliff and a gay little waterfall that tumbled down to a fern-fringed pool. (Continued on page 116)





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for every type of light craft E QUIP your boat with an L-A motor—for work, for racing, or for general pleasure and commercial use. In the L-A line—models 24, 41 and 68 in the inboard group and the L-A Twin in the outboard class-you will find a model suitable for every type of light craft.

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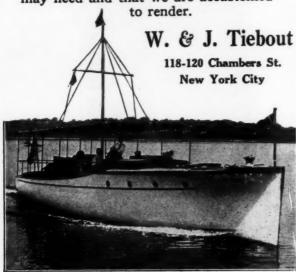
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Todd Dry Dock Engineering & Repair Corporation

Plant of Todd Shipyards Corporation Foot of 23rd Street, Brooklyn, New York



Parsons Turbinos Oli Burning Equipment (legtrie Drive Installation

# Bu Waterways to Gotham

(Continued from page 114)

It was the sort of a place which one never finds by deliberate search, but has to be dropped into from an airplane, or blown to it as I had been.

A pair of deer jumped up and scampered back into the forest as I started gathering firewood along the shore, and when I went to look at their tracks I found larger and deeper prints which indicated that a hulking bull moose had been on watch there within the hour, possibly at the time of my landing.

landing.

Setting alight a hundred-cord pile of driftwood as the twilight shadows lengthened, I built a fireplace from rockslabs on the beach wherein to barbecue Long Jim's parting gift, a haunch of venison. This would have been a half-day operation ordinarily, but with the coals from the roaring driftwood fire to draw upon the joint was done to a dark brown turn in a couple of hours. Pauline Pateman's can of

brown turn in a couple of hours. Pauline Pateman's can of strawberries and cream, cooled in the icy pool beneath the waterfall, furnished a delectable dessert.

What a feast that was! And what a setting for a feast! The passing of the squall had cleared the heavens and the falling of the wind had allowed the lake to settle back to one of its rare spells of placidity. The reflected lake-stars blinked languidly back at the sky-stars as the darkness deepened, while far across the North Channel a locomotive puffing along the mainland of Ontario plowed the sky with shafts from its headlight. From northeast and northwest beacons on shoals or islands threw tremulous gleams across the on shoals or islands threw tremulous gleams across the slowly heaving waters, and once the blurred block of lights of a passenger steamer teetering along the edge of the

horizon.

My big camp-fire, reflected in pool and lake and in rosetinged shaft of the waterfall, roared skyward for an hour
before dying down to a heap of dulling embers. Fire-flies
fluttered up as I spread my bed among the daisies, darting off
among the birches to lace the air with golden wires. Later,
when the big fire was quite dead, other lights, flashed out to
join the dance of the fire-flies. These were vitreously green
and always marched in pairs. Some of these belonged to
deer, I told myself drowsily, and maybe some of them belonged to moose.

Unged to moose.

When a pair of sharper, brighter eyes appeared, I thought of wolves and bears and started to reach for my axe. Then, or wolves and bears and started to reach for my axe. Then, remembering that the lower animals could be cowed by the power of the human eye, I began systematically staring down the lurking enemy. But either my own eyes or those which I sought to cow would not behave according to rule. I felt the gleaming pools of terror drawing nearer and nearer, burning me with their heat. Seizing my axe as a last resort, I aimed a skull-crushing blow squarely between the nearing order of fere

I aimed a skulf-crusning blow squarely between the hearing orbs of fire.

Cleaving through empty air, the keen blade buried itself among the daisies. I had miscalculated the distance and struck too soon. Probably the error will stand as one of the greatest on record. By how much I had missed my mark I did not realize until, shocked broad awake, I sat up and found myself blinking into the eye of the newly risen sun.

Ningty-five million miles is a real miss especially when using

Ninety-five million miles is a real miss, especially when using a hand-to-hand weapon like the axe.

Anxious to reach the sheltered islands of Georgian Bay before another storm blew up, I breakfasted hurriedly and pushed off into smooth waters that glittered like a golden mirror in the slanting light of the morning sun. With my motor running like a top, I headed easterly between the picturesque Vidal Islands and the broad open bay of the same name. Occasional reefs and shallows were indicated along my northeasterly course to Cape Robert but these were not my northeasterly course to Cape Robert, but these were not nearly so menacing as the infernal nests of rocks through which I had navigated in northern Lake Michigan and on the run from Mackinac to Cockburn Island.

the run from Mackinac to Cockburn Island.

Standing due east from Cape Robert, I traversed the wide mouth of Bayfield Sound, coasted Barrie Island and headed across Julia Bay to the light on Janet Head. The little town of Gore Bay, straggling over a steep, green hill-side, beckoned me in for lunch but I thought it best to save time by munching crackers and venison in that boat without shutting off the engine. An hour later a big moose, swimming directly across my course, offered more serious temptation. It would have been a glorious game to have roped him and had a tow. Knowing from previous experience, however, that there was no certain way of making him tow in him and had a tow. Knowing from previous experience, now-ever, that there was no certain way of making him tow in my direction, I contented myself with the friendly hail of one passing voyageur to another and ran on toward where Clapperton and a number of smaller islands closed the mouth of the wide North Channel. This marked the end of my open water navigation. From that point on there

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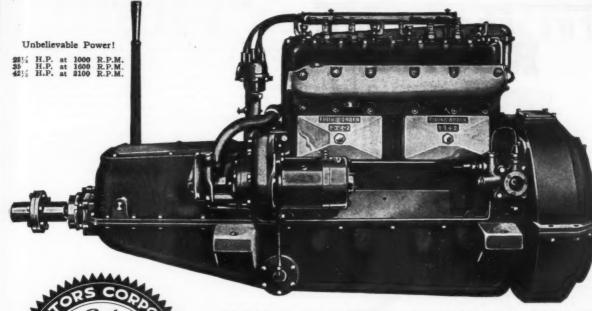
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. "Mr. Munro landed with his boat at our wharf this morning, and the writer had the pleasure of a spin in the harbour with her. She sure can travel. She is a 21 ft. by about 6 ft. beam, Hand "V" bottom, and travels better than 23 miles per hour. The lack of vibration is amazing and she purrs along with a velvety smoothness which the hard-headed marine engine expert would not credit, unless he had the good fortune to sit behind an 'ERD' in action.

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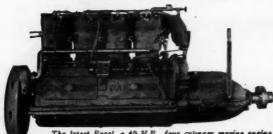
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# By Waterways to Gotham

(Continued from page 116)

was shelter available at no great distance from my direct course practically all of the thousand miles or more which remained to be traversed before reaching New York.

remained to be traversed before reaching New York.

But there is a difference between shelter directly upon one's shortest course and shelter which one must pursue a circuitous route to take advantage of. I had been tossed on the horns of this dilemma all the way from Milwaukee, and now, as I came out of the narrow reef-beset Clapperton Channel to the comparatively open waters of West Bay, I had to choose again between a shorter course and the safer one. safer one.

Directly across the open water, distant not over fifteen miles, the smokes of the Little Current sawmills were being smeared across the heavens by a gusty northeasterly wind. To the north were the rolling thunder clouds from which the wind was coming, preparing for their regular afternoon sweep of the lake. On the direct traverse to Little Current one was certain to meet the squalls well toward the middle of the bay, five or six miles from the nearest land. Only by a roundabout course to the north, jumping a mile at a time from Clapperton, Amandroz, Bedford, Rous and minor islands,

a roundabout course to the north, jumping a mile at a time from Clapperton, Amandroz, Bedford, Rous and minor islands, could one keep in a more or less continuous lee.

As this sheltered course would have involved running twice or thrice the distance of the direct one, and in shoal water most of the way, the price of immunity struck me as being a bit high, especially as there was no certainty of encountering a heavy blow in any event. And so I headed straight across for the smokes of Little Current, to learn, as usual, that the longest way round is the shortest way out.

The storm, as I had anticipated, came to meet me at about the center of the bay, blotting out all of the eastern and northern coast line and islands in its swoop. As soon as I saw the extent of the force of the disturbance, I opened up the engine and ran at full speed for the lee of Bedford Island which, with its two hook-shaped southerly points, promised ample protection from any wind that might blow. This brought me into head-on collision with the advancing forefront of the squall. As soon as it became evident that I could not run at enough speed to make headway against the storm without swamping, I throttled down the engine and tried to stay where I was. When even this proved too wet, I was confronted with the alternative of throwing out a sea-anchor or turning and running for the north coast of Manitoulin. Not knowing just how much more wind was still in reserve to be loosed from the heart of the black smother of nimbus to the northeast, I decided upon the latter course as the safer, in that it would take me landward faster in the event the blow was a really heavy one.

Turning and running brought some relief from the continuous shower-bath to which I had been subjected while trying to buck the rising seas, but for the first mile or two the boat did just about as wild a bit of wallowing as she had done at the height of the big storm at Lake Michigan. The wind appeared to be easing a bit as we neared the coast, which encouraged me to attempt

appeared to be easing a bit as we neared the coast, which en-couraged me to attempt to hold on with the oars immediately beyond the outer line of the surf rather than to risk a swamping in attempting a landing on a beach which was quite as rough and rocky as that which, with much less sea running had kept my hands full in making the previous evening

It took hard, steady pulling to counteract the shoreward drift for a while, but at the end of twenty minutes I was rewarded by a perceptible falling off of the wind and finally by the paling of the northeasterly heavens which signalized the passing of the squall. An hour's run in smoothing waters under a clearing sky took me in to a snug mooring at one of the docks of the historic old post of Little Current.

(To be continued)

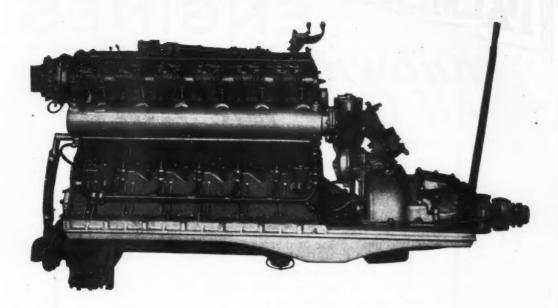
## Sterling's Book of Boats

An unusually well prepared booklet has been issued by the Sterling Engine Company, illustrating their recent Sea Gull engines, as well as a large number of the most modern types of high-speed craft in which these are employed. There are runabouts and cruisers of the most modern design, and each one is completely described with technical data as to the engine, propeller and speed attained. In addition, some detailed illustrations of special features about the engines all help to make the booklet attractive and worth while. booklet attractive and worth while.

#### Interest Abroad in Outboard Engines

Exhibitions in Spain and Italy were recently held, and the Elto Motor Company of Milwaukee displayed its outboard engines at both places. The Spanish exhibit at a recent automobile show was in charge of Talleres Aco, S. A. of Ia Coruna, Spain, while the Italian exhibit was at the Milan Fair.

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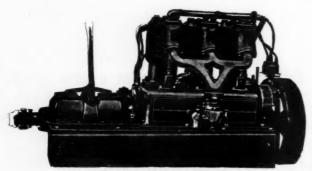
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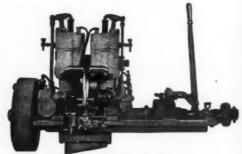
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Advertising Index will be found on page 158

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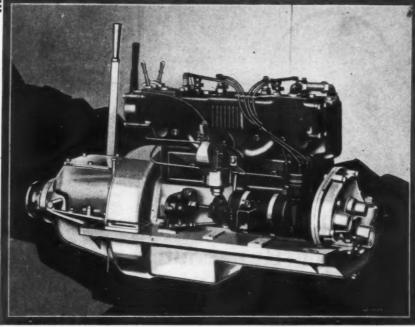
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Model





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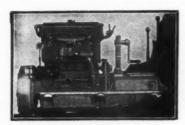
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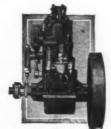
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Detroit, Michigan



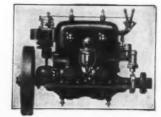
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Model "O"—4-5 H.P. valve-in-head 4 cycle. Magneto equipped, 3%" x 4½", 1,000 R.P.M., 165 pounds. Kerosene or Gasolene



2-Cycle, 6-8 H.P.

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DUNPHY BOAT MFG. CO. Eau Claire, Wis. Dept. C1



## There's Nothing to It

(Continued from page 18)

ever you've been on Lake Michigan you know it can get very dirty. We tossed and pitched and rolled. Denne, and there never will be a better skipper, was at the wheel. I there never will be a better skipper, was at the wheel. I went below to get supper. And let me tell you that it was an actual joy to work in that galley; and the galley on Sea Drift is smaller than the one shown here. Along about five bells (six-thirty) I called Denne; and the length of time he sat at that table testified to the excellence of the meal cooked in that little galley. There was mighty little left to throw overhoad! overboard!

When you first consider the purchase of a boat, you will probably buy some motor boating magazine and study the advertisements. And when done, you will feel that you have a wide range of standardized boats to select from. This is

not so.

The word standardized is greatly misused by boat build-rs—with one or two notable exceptions. With the average uilder it means little or nothing. He designs a boat on the builder it means little or nothing. builder it means little or nothing. He designs a boat on the drawing board, and calls it standardized. He may never build even one. He will if he gets an order for it. If he does build one he takes photographs and announces in his advertisements that the boat is 'standardized.' If another prospective purchaser comes along and likes the plan in general, but wants the galley two feet longer, the berths one foot wider, the cockpit one foot deeper, these changes are made—and the boat is still a standardized product.

So you will discover, if you follow up the advertisements, that you have a wide range of plans to select from, but not boats. And it is not advisable for the motorist, considering

boats. And it is not advisable for the motorist, considering the purchase of his first boat, to have one built for him.

In the first place, there is the time element. Your boat builder will tell you, on June fifteenth, that he will launch your boat on August fifteenth. Time means little or nothing to him. What he means is that he hopes to have your boat ready by that time. But as a matter of fact if you get it by September fifteenth, you will be doing very well.

Again, I do not believe that the motorist without boat experience is able to say just how he wants the interior arranged. This plan may appeal to him; this one looks a little better. After he has been on a boat built from either plan, he will wonder why on earth he put that locker there, this seat here; he will see ever so many places that ought to be changed to make the boat just what he wants. And even with these done it won't be just what he wants because he doesn't know himself just what he wants—due to lack of experience.

Moreover, the motorist will get far better value for his money, by buying a stock boat, than he will if he tries to build one. For the same reason that he can buy a splendid car for \$2,000.00; if he were to build it, it would cost him, well. I hate to say!

well, I hate to say!

So I suggest that you confine yourself to stock boats; giving standardized plans a wide berth. With the stock boat you can see just what you are going to get; you can have a demonstration; you can see just how the boat handles in the water; and you can get a definite date of delivery.

And while your choice will be somewhat restricted, due to the fact that there are only a few companies building stock cruisers, still you will have a fair range. For example, a twenty-six foot cruiser that will accommodate four, and have

twenty-six foot cruiser that will accommodate four, and have streety-six foot cruiser that will accommodate four, and have all of the conveniences of the summer cottage, at a cost of \$1,750; a larger cruiser, thirty-four feet long, at a cost of \$5,500; a still larger one, thirty-six feet long, that has a private stateroom in addition to the main cabin, at a cost of \$7,500. All standardized in the fullest sense of the word, all stock boats and all built by well organized and well managed companies that one not conclusions to the state of the

anged companies that are not everlastingly going through a re-organization in order to keep out of the sheriff's hands. So what type of boat shall we get? We don't want it too large, so large that it will be a drain on our purse; and yet we want it large enough to accommodate the average family— two adults and two children. And it must offer all of the conveniences of the summer cottage, for we are going to use it as such; to us it is going to be a real home affoat.

Then the length does not want to be less than twenty-five feet, nor more than say thirty-six. And it should be either raised deck or trunk cabin, and preferably trunk cabin. We are going to steer clear of freak designs. We'll investigate carefully the standardized, stock boats that are offered, we'll gather catalogs and photographs and specifications, and then in family council we'll decide the all-important equention of which presents.

portant question of which one.

Now, having purchased our boat: what equipment do we

Before discussing this subject of equipment in detail, (Continued on page 126)



THE joy of Christmas morning will be keener than ever when the Johnson Motor is found beneath the tree.

For the happiness that the gift of a Johnson brings is increased by the prospect of countless joyous vacation days to come.

Happy, carefree hours of motor boating for Dad and Mother as well as the young folks.

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# There's Nothing To It

(Continued from page 124)

permit me to offer one general suggestion: Get good equipment! It may prove to be a bit more costly in the beginning,

ment! It may prove to be a bit more costly in the beginning, but it will prove less expensive in the long run.

Take the compass for example. When we bought our first compass, a compass to us was simply a compass and any old compass would do! We visited a store and bought a bargain. It proved absolutely worthless. In the first place the card was not marked in sufficient detail, and secondly, the compass was so light, or mounted so poorly (I do not know which) that every motion of the boat affected it.

I thought that the behavior of my compass was typical of all compasses; and I marvelled at how anyone could use such a thing. One day I visited an experienced skipper. I saw his compass. I came away a wiser man.

This question of equipment divides itself into four general classifications; (1) navigation equipment, (2) boat gear, anchors, lines, etc. etc. (3) engine room equipment, and (4)

chors, lines, etc. etc. (3) engine room equipment, and (4) miscellaneous. In this article we will list all of the equipment and describe the use of each article with the exception of navigation equipment which will be discussed in articles on that subject.

Navigation: Compass Pair of dividers Course Protractor Patent Log Lead and Line Good clock

Boat Gear:

Emergency anchor, 100 to 150 pounds. Service anchor, 60 to 85 pounds Kedge anchor, 40 pounds

anchor

Anchor cable, 200 feet, 1 inch Extra anchor cable, 200 feet, 1 inch Supply miscellaneous rope and cordage

Mooring lines Lantern Flashlight Fog bell Fog horn Whistle Life preservers Ring Buoys Fenders Fire extinguisher

Bilge pump Broom Deck mop

Bucket Boat hook Engine Room:

Good set of tools

Extra ignition wire Assortment of brass and galvanized nails and screws

Miscellaneous: Barometer Thermometer Cooking stove

Spare bulbs for lights

The average small boat does not carry an anchor heavy enough. I have seen power boats of thirty-four feet length with a nice little forty pound anchor carefully lashed on deck. And I have wondered what it was for! Certainly a forty-pound anchor is not going to hold a thirty-four foot boat in much of a blow.

Your equipment should contain three anchors. The first is wholly an emergency anchor; if caught in a bad blow off shore and obliged to anchor. This should weigh, for a thirty-four foot boat, 100 pounds. Heavy, of course; but under the conditions described you do not want a plaything! Keep it stored away somewhere; in the lazarette, under the cockpit floor, any place where it is out of the way and yet convenient.

convenient.

The second anchor is the service anchor. It should weigh about 60 pounds. This is the anchor we use when spending the night in some strange harbor; or when loafing in some out of the way place for two or three days. It is the anchor we use under all ordinary conditions except when we want to

remain in one place for perhaps only an hour or two.

The third anchor is the kedge; a little forty pounder. This is kept on deck along with the service anchor. And we use it if we want to stop for lunch in some inviting cove; or stop so the youngsters can row ashore and have a swim from a

smooth sandy beach! It has another use which we'll come to

presently.

Now for the style of anchor. Many boatmen use what is known as the stockless anchor. Personally, however, I have no use for a stockless anchor and I have tried my best to use it. But without any luck! Somehow or other, I can't make a stockless anchor hold. I prefer the kedge type of anchor. This is a bit more awkward to handle I'll admit, but it will hold-and that is what we want!

An anchor is not dropped, or cast, or thrown out. It is let go. And frequently whether or not an anchor holds, depends upon how much cable is paid out. Generally speaking,

the length of cable paid out should be about four times the depth of water; more is better but never less.

Look at Figure 7. The angle marked A should be as small as possible. The smaller it is the better the anchor will hold, as possible. The smaller it is the better the anchor will hold, the bottom of course being suitable. Sometimes, however, owing to the close proximity of other yachts it is not always possible to pay out enough cable. Under such conditions an emergency use of the small kedge is as follows: Attach to it a heavy snap hook. Then catch the hook over the anchor cable. Attach a light line to the kedge and let it slide down the cable. When it has gone far enough the line can be secured. This will many times make the larger anchor hold. Moreover, it will keep the boat from pitching. (Figure 8).

You have probably observed a tugboat with a long line of barges in tow and have wondered at the great length of towing cable; at the great distance between tug and barges. Further, perhaps you have noticed that even though the tug is pulling the barges, the tow line is not taut but has considerable sag. If it were not for this sag, the chances are that the first heavy sea that hit the barges would snap the tow line. As it is, when the barge pulls back it has first to take up this slack. This eases the shock so that all sudden

snapping strain is eliminated.

The same idea applies to a boat at anchor. If sufficient cable is paid out, the very weight of the cable will snub the jerk of the boat when a wave hits her bow; or a weight, such as the kedge anchor, will accomplish the same purpose. While the kedge anchor can be used for this, it is better to weight can be picked up at any blacksmith's shop. Thus you see the kedge (or weight) run down the anchor cable serves two purposes; it reduces the angle so that the larger anchor will hold, and it serves to snub the pitching of the boat.

The kedge anchor has still another use which may make it worth its weight in gold. It did with us one morning.

We had been on an all day run and long after sunset ran into a small cove for anchorage. I was tired. Not from handling the boat but from pounding a typewriter; I had struggled most of the day with a manuscript that was long

overdue.

All I wanted was to have a cup of coffee and turn in. So I did not take any soundings to see how much water we were in, nor did I bother with looking up the tides. And I slept so soundly that I did not hear, early in the morning, the grating noise that indicates being aground. Indeed, I did not realize we were aground until, along about four bells (six o'clock) when I felt the boat to be at quite an angle. A hurried inspection developed the fact that the tide was going out and that if we did not act quickly we should

wholly aground. We got the kedge and rowing out some distance in the dingy, let it go. Then we returned to the boat and started in to pull on the kedge. First we simply pulled it toward us; then we felt it drag; and then we felt it bite. Now we pulled easily and yet for all we were worth; and presently had the satisfaction of feeling the boat right itself. We had had the satisfaction of feeling the boat right itself.

warped ourselves out of a mean situation.

If ever you have to use the kedge for such a purpose let me give you a tip that may save you from an unexpected ducking. Don't place the kedge in the dingy and then attempt to throw it overboard. It is most difficult to throw a heavy weight from a small boat without upsetting the boat. the kedge over the stern and hold it there by pressure of your foot against the cable. Then when you want to let

it go simply release the pressure.

When coming to anchor the boat should be backed off the minute the anchor is let go. If not, the cable is likely to foul The boat should be backed off until the anchor the anchor. drags and then grips. And remember to pay out as much

(Continued on page 128)



Danger shead! Without taking your eyes off the pier, just lift the tiller—a natural impulse—and your Evintude Sport Twin instantly reverses, and you travel full speed astern, instantly!



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# There's Nothing To It

(Continued from page 126)

Give a good anchor half a chance and it cable as you can.

will hold you in the heaviest kind of a blow.

The next item on the list is a sea anchor. I would not be without one; and yet I have been ridiculed for carrying one. A sea anchor is different from the other anchors we have described in that it floats under the surface of the water.

described in that it floats under the surface of the water. It serves, really, as a drag.

It is a big, hollow cone, made of heavy canvas. At the small end there is a small hole; at the large end there is a heavy ring to which the canvas is secured. From this ring, which may be three feet in diameter, there extends a bridle, or three lines (cables), which are fastened together to a small ring or thimble. To this is bent a three-quarter or inch cable. At the other end of the cone, the apex, is attached a light line termed the tripping line.

tached a light line, termed the tripping line

Now for the use of the sea anchor. Suppose you are cruising well off shore and in a fairly heavy sea. Motor trouble develops and makes it necessary for you to do some fussing. You don't want to get caught in the trough of the waves. So you throw out the sea anchor. Water rushes into the large opening and makes the anchor drag; the pressure of the water is released by the small hole in the The boat swings around because the bow is held by the anchor, or drag, and presently you head up into the wind. You ride into the waves so to speak, rather than in the trough; a very much more comfortable position. When you want to pull the sea anchor in, you do so by means of the trip line.

Of course, the sea anchor will not hold you in one place You'll drift with it considerably. I have never been forced to throw out our sea anchor but one day, in an adventure--just to see how it would work. some mood, I tried it-

At first I was inclined to regret the experiment for the sea was fairly heavy and the rolling motion of the boat in the trough very disagreeable. But in a few minutes she headed up into the wind and all was well. I had it out for about half an hour and was well satisfied with the experiment; but I drifted a great distance.

By all means carry a sea anchor. It folds up very compactly and takes little room. And it is a great comfort to know that you have it. Also, experiment with it some day so you will know how it works; how the two halves of the ring lock together. Then if you have to use it, you'll know just how to proceed.

The next item on the list is that of anchor cable; and this can be dismissed very quickly. Get good cable; a good manila rope of one inch diameter and get plenty of it! Two hundred feet ought to be enough; but three hundred is better. Two hundred feet will enable you to anchor in ten fathoms—a fathom is six feet. And the chances are you'll never anchor in any deeper water. But the extra hundred feet is mighty nice to have when in a bad blow, and you want to pay out for a good distance.

And always extra a property of the street hundred feet is mighty nice to have when in a bad blow, and you want to pay out for a good distance.

And always carry an extra two hundred feet of anchor cable. Some day you may have to cut your anchor. It might get caught in between two rocks and then the only thing to do is to use the sheath nife. Then the extra anchor cable comes in convenient if, later in the day, you want to

anchor again.

In fact always carry on board a miscellaneous supply of rope and cordage. It frequently comes in very useful. A ball of yacht twine for binding the ends of ropes to keep them from unraveling; twenty-five feet, or more, of small cotton rope to hang the bathing suits on while they dry; small

manila rope to attach to the bucket, etc., etc.

Mooring lines should be fifty feet long—at least. Seventyfive is better. And you need two; bow line and stern line. When tying up to the average dock twenty-five or thirty feet of line will be all that you use. I suggest more because some day you may want to tie up where you have to carry a line well ashore to get something substantial to tie to.

Your boat will in all probability be lighted by electricity; just as your car is. And the system is the same; that is, storage battery-charged by a generator.

The best of electrical systems will kick up at times how.

The best of electrical systems will kick up at times, however; so equip the boat with one kerosene lamp and then also put a lantern on board. Useful at night if you wish to row ashore in the dinghy. Also include two or three flash lights in your continues.

lights in your equipment.

Certain articles in your equipment are made compulsory by the Department of Commerce. These are fog bell, fog horn, whistle, life preservers and fire extinguishers. And these articles are usually supplied by the boat builder or if

you should buy a second-hand boat, it is customary for the

Two ring buoys with the name of the boat painted on them, one hung on each side of the cockpit, will not only serve as a decoration but as a utility if someone should be so unfortunate as to fall overboard. On many boats these are secured so tightly that in an emergency it would take five minutes to get them loose; unless one were to cut them loose, and the power boat skipper does not usually go around with a sheath-knife thrust into his belt!

Attach the ring buoys so that they can be removed quickly; and bend a line on each one. Then if someone does fall overboard, the buoy can be thrown out quickly and, falling short of the mark, can be thrown out quickly and, taning short of the mark, can be hauled in and the throw tried over again. And when it is grabbed the person in the water can be easily pulled to the boat. It is a surprising fact that ever so many boatment cannot swim a stroke.

so many boatment cannot swim a stroke.

The next item on the list is that of fenders used to drop down alongside of the boat when laying to a dock or landing. Get four. A kink used on many boats is to carry a piece of plank, perhaps eight feet long. Holes are bored in either end and through these a line is run. When the boat rubs alongside the pilings of a dock sometimes it is most difficult to arrange the fenders so that they will afford protection. Under such conditions the plank can be lowered so that it rests between the fenders and the piling. Thus a long horizontal surface protects the boat rather than the hanging fenders. hanging fenders.

Some boats are equipped with a power bilge pump. This is many times nothing but a cut-off valve so arranged that the water used for engine cooling is sucked from the bilge rather than from the sea. Thus when pumping out the bilge rather than from the sea. Thus when pumping out the bilge the bilge water is circulated through the cooling system of the motor. This is perhaps, all right; once the bilge is free the motor. This is perhaps, all right; once the buge is free and clear of sawdust and shavings. But I've seen boats two and three years old that still had sawdust and shavings floating in the bilge. I do not like the idea, personally, of running that stuff through the motor. So on Sea Drift we carry a hand pump and always use it in preference to the motor. Even though your boat is equipped with the cut-off valve get a real man-size bilge pump. a real man-size bilge pump.

D

The broom, deck-mop and bucket need no comment except perhaps the advice to use them freely! Nothing is worse, to my way of thinking, than a boat that is not kept up

properly.

It is customary for the boat builder to furnish a boat hook. This is a pole, perhaps seven feet long, with a hook on one end. Used for picking up moorings.

We will pass discussion of engine room equipment because you are familiar from your motor car experience with what

Among the miscellaneous articles are listed barometer, Among the miscellaneous articles are listed Darometer, thermometer, stove. The barometer and thermometer need no comment. As for the stove, the boat builder usually furnishes this—always in case of a stock boat. If, however, you have to buy a stove, examine all makes very carefully. Aside from boat experience, I have experimented with various types and kinds of stoves; kerosene, alcohol, gasoline, where are the sternishment of the property of the store of

vapor, etc., etc. On a boat I would not have anything but a kerosene stove. I would not put a gasoline stove on board under any condition; and yet many motor boatmen would use nothing else. Of course, if I had room, I would use a shipmate range which burns coal; but there is not room for stove of this kind on a thirty-four foot cruiser. Drift we use a two-burner Perfection kerosene stove and have found it most satisfactory under all conditions, blow high, blow low.

In a list of this kind about all one can do it to suggest the absolutely necessary articles. Ever so many items will occur to you that you will want; such, for example, as rubber boots, oil skins, sou'westers, fishing tackle, a small first-aid

outfit, etc., etc.

outfit, etc., etc.

To repeat once more; get good equipment! It will give you more satisfaction and prove much cheaper in the end.

(To be continued)

In the next installment Mr. Stevens has completed the purchase of his boat, equipped it to comply with the regulations and his own ideas on the subject, and now encounters the question of where to leave the boat in safety when it is not in service. Mr. Stevens takes up with you his solution to the problem of parking the boat, as he calls it, and you will find the next chapter equally as instructive and entertaining as those which have preceded it.

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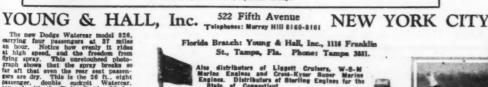
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# Across America by Motor Boat

(Continued from page 13)

Notwithstanding that the wind was blowing a howling gale right up the Columbia from the Pacific Ocean on the morning of May 20, we shoved off up the river with most of Astoria waving us on our way. A furious sea was running, and the problem of navigating was made all the more difficult by the roughness of the water, and the fact that every manner of driftwood and debris was coming down the river. The two principal industries of the lower Columbia River Valley are salmon fishing and lumbering. Thus we found the river literally strewn with everything from pulp-log bark to huge deadheads and floaters containing almost enough lumber to build a small house. Although we had Lewis and Clark turning up every possible revolution that could be coaxed out of them, our progress up the river seemed pitifully slow. There were times when we scarcely seemed to be moving. We had a lot of speed over the water, but our progress over the land seemed little more than a snail's pace. Added to this was the necessity of constantly zig-zagging along our course to avoid logs and debris causing us to lose ground against the current with every turn of the steering wheel. We battled wind, waves, current, and drift, from 8 o'clock—the hour of our departure from Astoria, until noon, when we arrived in front of the town of Cathlamet, Washington and decided to stop for a brief rest and lunch. Cathlamet is essentially a lumbering and salmon fishing community, and peopled largely by persons who don't speak English at all, or whose English is tinged with a decided Scandinavian accent. During the first four hours we had traveled we had eaten off just 24 miles of the more than 5,000 mile water route to the Atlantic Ocean.

Leaving Cathlamet, we passed out of the Columbia River Bay section of the Columbia River. The river began to narrow down between high, rocky, forested shores, which increased both the current and the congestion of the drift. If dodging logs and driftwood had been a severe nerve strain below Cathlamet, it became a nightmare above Notwithstanding that the wind was blowing a howling gale

dodging logs and driftwood had been a severe nerve strain below Cathlamet, it became a nightmare above that point. A few miles above the town the current became so terrific A few miles above the town the current became so terrinc that we could not make an inch of progress against it in the middle of the stream. We then began what the Columbia River boatmen call, working the eddies. In any swift-flowing stream, particularly where the shores are high and rocky as they are on the lower Columbia, there is usually a line of they are on the lower Columbia, there is usually a line of back-eddies along the bank. These lines of eddies may continue for great distances, or end very abruptly, depending upon the manner in which the current may swing from bank to bank as the river follows the deviations of its channel. In the eddies we could make fair progress, although we often ran dangerously close to the shore. Often a line of eddies would end at some curve of the river, and we would find ourselves plunging boldly into a surging current where we could hope to travel only in one direction—and that downstream. When this happened we'd cross the river, dodging When this happened we'd cross the river, dodging stream.

stream. When this happened we'd cross the river, dodging drift, and losing ground, but usually to find another line of eddies along the opposite shore.

Between one o'clock and five o'clock on the afternoon of our first day on the Columbia, we put ten gallons of gasoline through the motors, crossed the river from Washington to Oregon, and from Oregon to Washington no less than thirty times; and moved exactly ten miles upstream. Many times

times; and moved exactly ten miles upstream. Many times we seemed to stand absolutely still for five minutes at a stretch, and then gain ground almost imperceptibly around some swift current bend from one line of eddies to the other—often with scarcely a place in the entire river sufficiently free from drift logs and debris to put the boat without striking at least the smaller pieces of it.

The first disaster of the entire trip, and which proved to be the worst one of the entire ocean to ocean water journey overtook us just about five o'clock on the afternoon of our very first day's traveling. We had passed above the small cannery settlement of Eagle Cliff, in Wahkiakum County, Washington; ran out of a line of eddies, and plunged boldly into a roaring rapid that swept around a point on the Washington shore when Transcontinental struck some submerged object that virtually lifted her bodily, completely our of the water. There was a sickening crunching of lumber as the little craft settled back into the water with her starboard gunwale awash, and a sickening crunching of lumber as the little craft settled back into the water with her starboard gunwale awash, and the boat all but turning turtle. The motors were shut down almost at the instant of the impact, and in another second we were drifting downstream on a current that was running like the mill tails of Hades. All hands grabbed life preservers expecting to feel the boat settling down under us. But a hasty inspection of the hull revealed that no water seemed to be coming in anywhere. Realizing then that we were in no immediate danger of sinking, we began looking about for the cause of the disaster—and there it was racing down the

(Continued on page 134)



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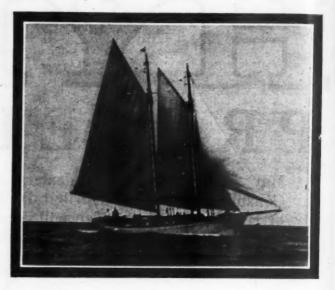
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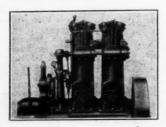


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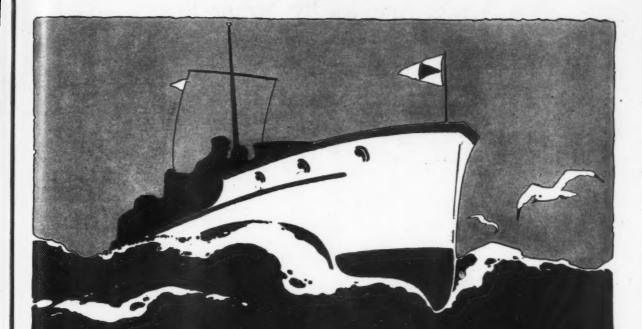
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# Across America by Motor Boat

(Continued from page 130)

river alongside of us. It was a deadhead of Douglas fir, a stick of wood sixty feet long and four feet in diameter if it was an inch in size by either dimension. The thing was bobbing along half sinking, half floating, but neither sinking nor all men in size by either dimension. The timing was bobbing along half sinking, half floating, but neither sinking nor floating. It had come right under the boat. Apparently it struck us squarely upon the keel, then slid back, and wiped out the stern of the boat as if the two inch layer of dowelled and screwed oak planking had been so much wet paper.

The two motors were hanging to the shattered remnants of the stern, and in grave danger of going overboard. I loosened the motors and hauled them aboard while Wilton loosened the motors and hauled them aboard while Wilton and Woodbury each grabbed a pair of oars and began pulling in the direction of Eagle Cliff. The stern of the boat was shattered beyond hope of redemption to within two inches of the water line. Some water had come aboard, but it was merely impounded behind the safety bulkhead built into the hull three feet forward of the damaged stern. Simultaneously the sullen, leaden sky which had been threatening rain all days exceed the and down came the rain in torrests.

day opened up, and down came the rain in torrents.

Pulling over toward the Washington shore we ran downstream on the mill race current, swung into the back eddy, stream on the mill race current, swung into the back eddy, and landed in a tiny harbor strewn with pulp logs beside the Eagle Cliff Cannery. Eagle Cliff isn't much of a town. In fact, the salmon cannery and its employes comprise the entire community. Nevertheless, we found hospitality and kindness there. The cannery superintendent invited us into his home where we dried our clothing before a roaring wood fire, and had dinner. There being no hotel in the village the superintendent turned the cannery office over to us in order to give us a place where we could camp out of the rain. The most appreciated feature of the cannery office was a big air tight stove with an abundant supply of fire wood. But for the power of the press the hospitality we received at Eagle Cliff probably would not have been so readily forthcoming. It seemed that every man, woman and child, in the community knew who we were, and what we were attempting to do the moment we landed. Certainly our landing there in distress on the very first day of the cruise bore no promise that our venture would ever succeed.

The following morning the cruise was a six and a six an

The following morning the rain was still coming down as The following morning the rain was still coming down as if someone might have been working overhead with a hose. It was not a very good day for open boat cruising. Furthermore, we were in no condition for cruising until at least temporary repairs could be made to the stern of the Transcontinental. The Eagle Cliff Cannery, however, had a well equipped machine shop, including all manner of carpenter tools, and a very promising pile of dressed dak lumber. Transcontinental was brought around under the shelter of one of the cannery sheds, and with the help of most of the shop the cannery sheds, and with the help of most of the shop force we went to work to repair the damaged stern. The job could not be done properly short of a major boatbuild-ing operation, but by noon we had temporary repairs made that bore promise of at least getting us to a boat shop in Portland. Although we got the stern cobbled into shape so as to hold the motors, we received a most discouraging shock when we attempted to operate the motors themselves. The drive shafts and practically all the under water mechanism of both engines had been damaged by our contact with the log. The motors sounded like a couple of rock crushers. The propellers would turn but it was evident that the engines were due for a major overhauling, and a renewal of parts not

included in our stock of spares.

We got under way again up the Columbia at one o'clock that afternoon, bucking the current, dodging driftwood and debris, and with the dilapidated motors creaking, groaning, wibrating and grinding. In spite of the handicap under which we were cruising we reached Kalama before sundown, and stopped for the night, camping on the river bank at the edge of the town on the Washington shore. In the entire run from Astoria to Kalama we had been so

In the entire run from Astoria to Kalama we had been so busy with the problems of navigating the Columbia in flood season that our interest in scenery, places of interest, and the like, had to be gratified somewhat on the fly. This portion of the Columbia is beautiful beyond description. Most of the river bank is rocky and abrupt with great hills stretching away to backgrounds of towering mountains. There are mountains everywhere, and the entire country is a solid carpet of forested landscape of the most vivid emerald green. There is much virgin timber still standing, but in places where logging operations have been carried on the second and even third or fourth growth timber can scarcely be told from the original forest. In this region of deep rich soil and abundant rainfall, a piece of land is no sooner cleared before the forest immediately begins to encroach upon it. If left alone it

quickly returns to the temperate zone jungle. The process of natural reforestation is so rapid that in only a few years a piece of land that has been logged off can scarcely be told a piece of land that has been logged off can scarcely be told from one that has never heard the sound of the woodman's axe. The second growth trees, of course, may be smaller than the virgin timber with which the Columbia River Valley was clothed when Lewis and Clark explored it, but that fact is imperceptible from one's point of view on the river. The Columbia River Motor Highway which parallels the Oregon shore of the river from The Dalles to Astoria is famed throughout the world for its scenic beauty. But, if the Columbia is beautiful from the motor road it is ten times more beautiful when viewed from the surface of the river itself. The country is especially beautiful in the springtime when the country is especially beautiful in the springtime when the Scotch Broom is in blossom sprinkling the entire landscape with patches of color that for all the world resemble areas of pure gold. It is the flowering of this plant which has given the Columbia River Highway the name—"The Road of Gold."

Above Kalama the close-up river scenery is much the same as along the lower river, but with huge snow-clad mountains looming up in the backgrounds. Mount Saint Helens, Mount Adams, and Mount Hood, come into view like tremendous piles of granulated sugar rising into the very skies. If natural scenic beauty has anything to do with making people happy and contented it is easy to understand why the web-footed natives of the Pacific Northwest are as inseparable

tooted natives of the Pacific Northwest are as inseparable from it as Damon was from Pythias.

Leaving Kalama early on the third day of our aquatic onslaught against the American Continent, we found ourselves with crippled, wheezy motors battling a 26 foot flood stage of water instead of the 20 foot stage we had had when leaving Astoria. Notwithstanding that fact we made that day the longest day's run accomplished on the transcontinental route in water flowing in the Pacific Way and the pacific Way and the pacific Way and the pacific way are former to the pacific way and the pacific way are flowing in the pacific Way and the pacific way are flowing in the pacific Way and the pacific way are flowing in the pacific way are the pacific way are the pacific way and the pacific way are the pacific way tal route in waters flowing into the Pacific. We made thirty miles up the Columbia, swung into the Willamette River, covered 18 miles up that stream and the Willamette Slough, and arrived in Portland that evening. The Willamette Slough, and arrived in Portland that evening. ette River was in flood, but the current was much less than in the Columbia, evidently due to back water from the Co-

Landing at the Portland Canoe Club's great houseboat at the foot of Morrison Street we found a delegation of newspaper photographers, reporters, and motion picture newsreel men who had been keeping the wires hot between Portland and Astoria in an effort to locate us. There was no such thing as concealing the damaged stern of the boat, so the we could do was to tell the reporters about the accident, and pose for pictures. The log hitting incident made big copy—first page stuff in the Los Angeles papers the following day and in nearly every newspaper in the United States having wire service, as we learned some days later.

The following morning Transcontinental was delivered to Von Der Werth Brothers boat shop, hauled into dry dock and permanent repairs begun upon the shattered stern. The motors went to the Evinrude Motor Company's Portland Branch, where Frank G. Epton, the manager, nearly turned the place upside down to see that we got the best service that could be rendered. The repairs to the boat and motors, however, held us in Portland for a week. All this time the Columbia and the Willamette continued to rise. Merchants in downtown Portland began pumping water out of their basements. Gasoline and electric pumping water out of their basements. Gasoline and electric pumping outfits began to appear along the lowland streets of the city, and our friend Epton was doing a brisk business in the sale of Evinrude centrifugal pumps. In spite of the fact that the basement of the Evinrude Motor Company's Portland Branch was flooded, and the demand for centrifugal pumps exceeded the appearance of the Evinrude Motor Company's Portland Branch was flooded, and the demand for centrifugal pumps exceeded the appearance of the company of the Evinrude Motor Company's Portland Branch was flooded, and the demand for centrifugal pumps exceeded the company of the co flooded, and the demand for centrifugal pumps exceeded the supply, Mr. Epton found time to drive us over the Columbia River Highway from Portland to Hood River, Oregon in order that we might study the river and the rapids from the shore. There seemed little doubt but that we could run the Garrison Rapids, but the Cascade Rapids didn't appear encouraging. In those rapids the Columbia drops 27 feet perpendicularly in a distance of 3 miles, and with the water thundering down this declivity now at a 38 foot flood stage, our chances for getting up appeared forlorn indeed. During our sojourn in Portland I also called upon my friend and fellow member of the Adventurer's Club of Los Angeles, Lieutenant Oakley G. Kelly, at Vancouver Barracks, Washington. Lieutenant Kelly, as most people will remember, made a little transcontinental fame for himself a couple of years ago when he and Lieutenant John Macreedy made a non-stop airwhen he and Lieutenant John Macreedy made a non-stop air-plane flight from the Atlantic to the Pacific. Lieut. Kelly sug-

(Continued on page 136)



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# Across America by Motor Boat

(Continued from page 134)

gested that some first-hand knowledge of the rapids might be gained by flying up the Columbia and Snake Rivers to Lewiston, Idaho—our contemplated destination in waters of the Pacific watershed. We wired the commandant of the Army Air Service at Washington that night requesting the use of an army airplane for the flight. But, evidently the Army Air Service wasn't interested in constructive publicity, or in whether we ever got across the continent by the water route or not. At least, no reply to our wire was ever received, the same appearently being ignored at Washington.

the same apparently being ignored at Washington.

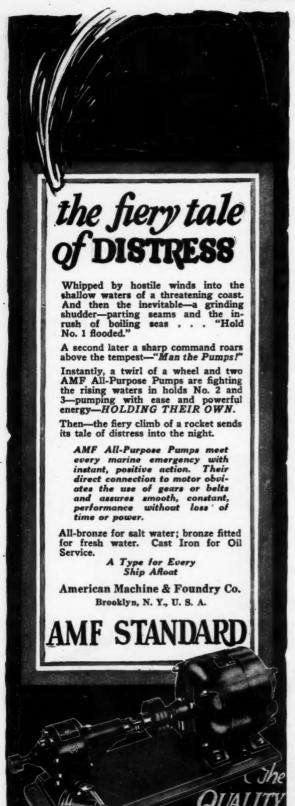
When we were finally ready to leave Portland with our engines and outfit in good order the flood had risen to the point that it was necessary to open one of the drawbridges across the Willamette River to let Transcontinental pass under. In a normal stage of water we'd have gone under this bridge with 30 feet of clearance. Running down the Willamette on a brisk current, and amongst a generous sprinkling of pulp logs, we got back into the Columbia in just an hour and a half. Then came a lively battle up the Columbia to Vancouver, Washington, where we desired to stop to see Lieutenant Kelly. Arriving at Vancouver Barracks, which is located right on the bank of the Columbia, we found that Kelly's aviation field was a huge lake—a dandy place for a fleet of seaplanes, but hardly suitable for land airplanes. With no word received from Washington, we decided to shove on up the river. We were to keep in touch with Lieutenant Kelly by telephone, and if the authorization for the use of the plane was received he would meet us with the aircraft at Grand Dalles, Washington. My last phone call to Kelly was from The Dalles, but no word had been received from Washington, and he had been ordered on a flight to San Diego, California.

With no further opportunity to study the river beyond what we had already accomplished we shoved off from our mooring alongside Lieut. Kelly's airplane hangar—put-putted across the submerged aviation field, under a railroad culvert, and back into the surging, and still rising Columbia. The current was so swift that we could make little or no progress.

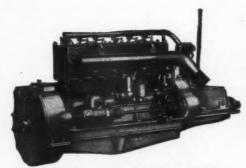
With no further opportunity to study the river beyond what we had already accomplished we shoved off from our mooring alongside Lieut. Kelly's airplane hangar—put-putted across the submerged aviation field, under a railroad culvert, and back into the surging, and still rising Columbia. The current was so swift that we could make little or no progress against it in the middle of the stream. Wilton, who had been at the steering wheel much of the time became extraordinarily adept not only at avoiding logs and debris, but in running startlingly close to the shore without actually hitting it. A few miles up the river above Vancouver we encountered a stretch of water where the current was so swift we could not move against it. Forthwith, we maneuvered to the Washington shore, entered a submerged peach orchard, and navigated between the tree tops for several miles. When the submarine orchard finally gave way to higher ground protruding out of the flood we cruised back into the river where we found navigable water above the swift portion we

had detoured via the peach orchard.

On this portion of the Columbia we began encountering a new obstacle to our ascent of the flooded river, and which remained with us until we portaged out of the stream to the waters east of the continental divide. This was the many salmon wheels along both banks of the stream. If there ever was a contraption that is a synonym for Yankee ingenuity and a lazy man's method of catching fish, a salmon wheel is precisely that. It is merely a great dip net constructed in the form of a wheel, and set in the swiftest part of the river. The current turns it, and the salmon swimming upstream following the fastest water, encounter the rear dip nets of the moving wheel to be lifted out of the water. As the wheel continues to turn the fish are dropped into a trough built around the axle of the wheel. They then slide down a chute into a bin where the fisherman desists from smoking his pipe long enough to tap them on the head with a baseball bat. The fish wheels are usually built on piling a hundred feet or more from the, shore, and in order to get swift water past the wheel, weirs are built between the shore and the wheel. Thus, a boat coming up the river cannot pass a fish wheel except to go out around it, and that means going out into the swiftest water the stream has got to show. Fortunately, however, we found many fish wheels that were temporarily out of business because of the high water—being wholly, or partially submerged. When the wheels were submerged the advantage was all ours because we could climb over them with the boat without going out into the swifter water. Although the water over a flooded fish wheel was sometimes a minor waterfall we managed to get past a number of them by passing over. The weirs were especially troublesome, particularly those that were not flooded to our entire satisfaction. We squeaked over one weir on the



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# PACKARD MARINE ENGINES

PACKARD MOTOR CAR COMPANY DETROIT, MICHIGAN

# Across America by Motor Boat

(Continued from page 136)

Washington side of the river where the water was coming over it as if over a dam. There was a two foot wall of water spilling over the top, and it seemed impossible that we might drive up over it. We attempted to go around the end of the wheel, but in spite of the fact that I had Lewis and Clark doing their stuff for the last r.p.m. that could be gotten out of the screws, we got washed back. Mr. Woodbury, who is a powerful oarsman, got an idea that he might help the boat up with oars, but only to discover that the water was going past us so fast that he couldn't get the oars into the water and out again fast enough to let him exert the slightest pull. We then decided to attempt going over the weir, but with no assurance that we could make it, with less assurance that we would not hang up, and possibly have the boat capsized. If we failed to get over the weir with our power, there was still a possibility of being able to line the boat up the watery slope working from the shore.

After getting washed back from around the end of the wheel for the third time, we dropped in below the weir, tuned the motors for the last possible turn, and with a determination to get over or get wrecked—slammed into the torrent of white water below the miniature cataract. The current and the white-topped waves tossed us this way and that, but we finally worked the bow of the boat up to the column of solid green water that was pouring over the top of the weir. The boat hesitated as the engines raced in the bubble-perforated white water that offered no solid hold for the propellers. For about two minutes we never moved, either upstream or down. Then the bow began to rise. It gained the top of the green wall of water that was pouring down threatening to engulf us if we ever lost our power or got turned sideways. It kept right on going until the forward end of our keel was all of three feet out of water. The stern was dangerously low as the engines thrashed the bubbles out of the water behind us. We came to a dead stop, slid back a few inches, and then stood still again. For the next ten minutes we played a game of heads and tails with the water on top of the weir—gaining a few inches, slipping back, and then gaining again. Finally we eased ahead until the propellers got clear of the foaming water that caused the motors to race. They dug into the solid column that poured over the top, and we went ahead a few inches. We held our own, and then inch by inch began to creep ahead. It seemed an eternity before we began to really go somewhere—then we gained distance at a little better than a snail's pace, realizing every second that the slightest failure of the motors might dump us into disaster over the weir. But the motors did not fail. Inch by inch we crept upstream, until we caught a back eddy along the shore and went shooting on upstream at a prodigious rate of speed.

gained distance at a little better than a snail's pace, realizing every second that the slightest failure of the motors might dump us into disaster over the weir. But the motors did not fail. Inch by inch we crept upstream, until we caught a back eddy along the shore and went shooting on upstream at a prodigious rate of speed.

On up the Columbia from a few miles above Vancouver to Waushougal, Washington, the going was just a twenty mile battle against white water; up and around, or over salmon wheels, or scooting through eddies in dangerous proximity with the shore. Nevertheless, we ended that day's cruising at Waushougal, the first day out of Portland with a total of 42 miles put behind us—and of which 28 miles had been accomplished up the raging Columbia.

Leaving Waushougal early next morning we began the ascent of the great canyon where the Columbia breaks through the Cascade Mountain range. From a scenic viewpoint this portion of the river is one of the most exquisite

Leaving Waushougal early next morning we began the ascent of the great canyon where the Columbia breaks through the Cascade Mountain range. From a scenic viewpoint this portion of the river is one of the most exquisite things on the face of the earth, but for us, with the water now at a 38 foot flood state, and confined between rocky, precipitous walls, the word DEFEAT seemed to be written all over the landscape. All along the Columbia from Astoria to the foot of the Cascade Range we'd been told of the terrors of Cape Horn. Everybody with whom we talked had told us what a terrible place Cape Horn was—a high bluff on the Washington side of the stream at the edge of the Cascade Range, with the river boiling down around it, and where we could almost certainly anticipate disaster. We recalled that Cape Horn at the tip of South America was notorious as a graveyard for water craft—and we were assured by the crepe hangers that Cape Horn on the Columbia was a befitting namesake for the one on the island of Tierra del Fuego. So, we left Waushougal that morning with all manner of apprehensions over the fact that the dreaded Cape Horn was just ten miles upstream around a bend in the river.

We bucked several miles of terrific water after leaving Waushougal, and then inaugurated a new principal in Columbia River Navigation. Although the Columbia along this portion is confined between rock cliffs, there is a little

bottom land on both sides of the stream during low water. This bottom land, of course, had been obliterated by the high water. Only a few tree tops sticking out here and there indicated where the bottom lands really were. They were bottom lands in the full sense of the term—being in the bottom of the river. We began running through the bottom lands, finding water which was virtually an elongated swamp, but practically free from current. In navigating through these areas and trying to keep on a general course upstream we got lost several times, hung up in a fish net once, and stalled on two barbed wire fences. Another time we traveled for about four miles up a lovely piece of swamp land expecting to find a hole out into the river again, but only to find ourselves in a blind bay, from which we had to retrace the route we had followed in. Cruising through the woods in an effort to find the river, we passed through a submerged farm, rescued a half starved tom cat from the protruding roof of a barn, and finally came out into the river at the foot of Cape Horn.

D

at the foot of Cape Horn.

Had we contemplated Cape Horn for a thrill, we'd have been doomed to disappointment, for it was a tame place compared with the descriptions we'd heard of it. All it really amounted to was a ragged promontory of almost perpendicular, reddish, volcanic rock, with the broad Columbia sweeping around it. The current looked formidable, but steering boldly into it, we were delighted to find that we had at least a quarter of a mile per hour of headway left against the current. Thus, getting around Cape Horn proved to be merely a matter of cruising for about an hour and a half. There were moments when we scarcely moved at all, but inch by inch we gained ground until the infamous Capo de Hornos finally slid astern. All this time Lewis and Clark had been doing their work at exactly one hundred per cent efficiency. Had one or both motors failed all the upstream gains made in an hour and a half would have been lost in about two minutes.

an hour and a hair would have been lost in about two minutes. After battling up the river for a few miles we came to the foot of the Garrison Rapids, went ashore, and surveyed the entire torrent for the two and a half to three odd miles of its length. Salmon wheels appeared to be the worst factor we had to contend with. There was a fine line of eddies along the Oregon shore half way up the rapids. If we followed that line of backwash to the top, it seemed that we should be able to swing back to the Washington side without losing sufficient ground to bring us in below an impassable wheel and weir that jutted out on that shore half way up. If this plan worked out in practice as in theory, we'd be able to catch another line of eddies that would take us up the rapids, and to the foot of the more formidable Cascade Rapids above. The only way to determine the success of the plan was to try it. Forthwith, we shoved off, gave Lewis and Clark the full throttle, and headed across the river at an angle of about 60 degrees. We were swept down stream by the current, but managed to drop into the tail of the eddies on the Oregon side. Then we began going upstream. Although we were tossed about, and dangerously near the rocky shore sometimes, by the swirling currents of the eddies; we gained the top of the line. Here the full force of the rapids shot out from the end of a rocky point as a six foot wall of water resembling the jet from the nozzle of a monstrous fire hose. We regarded this torrent cautiously, put on our life preservers, and then swung out of the eddies.

In spite of the fact that we did not swing over into the main current until we dropped down the eddies to a point where the main force of the jet around the point was somewhat spent, it felt as if we had bumped into a stone wall when the current caught the bow of Transcontinental: We recovered from this first slap, got headed across the river at an angle of 45 degrees, and with the boat dancing like a cork in seething white water, sped for the Washington shore. We moved crawfish fashion at least a half mile down the river in making the crossing, but managed to squeak into the eddies on the Washington side with a margin of ten feet downstream yet to spare. Had we missed the eddies we'd have been in a fine kettle of fish—for immediately below was a semi-submerged salmon wheel and weir clogged with all manner of logs and debris, and with the current going over it and around it like a mill race. Losing our power at that instant would have precipitated disaster for no power under heaven could have kept us out of the salmon wheel in event of such a mishap. Moreover, going into the salmon wheel would have been the end of Transcontinental and probably her crew.

(Continued on page 140)



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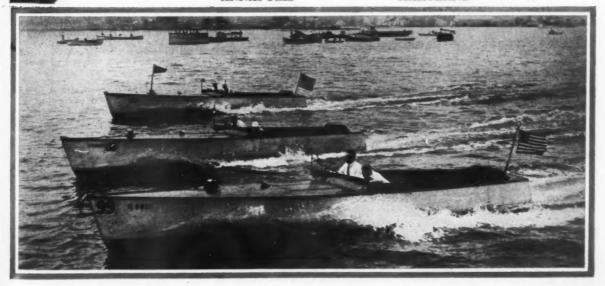
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#### Across America by Motor Boat

(Continued from page 138)

Running the eddies to the top of the rapid was then comparatively easy. We gained the top aided by the backlash of the current along the shore, and then had about a mile of fairly easy going to the foot of the Cascade Rapids. The Cascades are genuine Honest to Agnes rapids. Here the Columbia drops down a rock-bound canyon 27 feet perpendicularly in a distance of three miles. In Portland I had talked with several men who claimed to have shot the Cascades in canoes or other types of watercraft, but at Bonneville, Oregon, and several other points near the rapids I also talked with old residents who emphatically assured me that no human being ever went down the Cascades—and lived to tell about it. Moreover, with 38 feet of flood water thundering down the canyon the rapids looked like a fine place for some dejected mortal contemplating suicide.

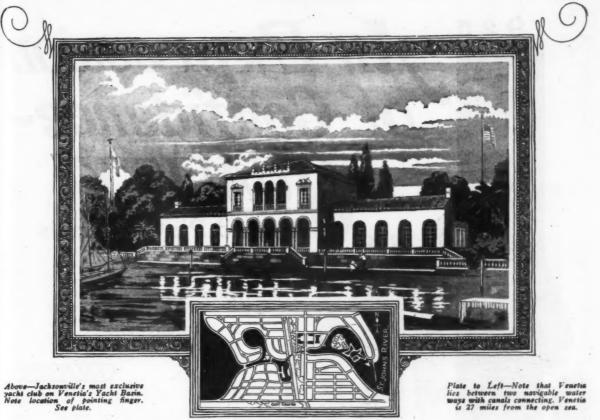
some dejected mortal contemplating suicide.

We arrived at the foot of the rapids opposite Bonneville, Oregon about five o'clock in the afternoon—too late in the day to attempt anything other than a survey of the torrent that day. We therefore crossed the river, tied up in the backwater estuary of Bonneville Creek, and pitched camp on the property of the Oregon State Fish Hatchery—after obtaining the permission of the hatchery superintendent. The following day being Sunday, we decided to spend the day studying the rapids and endeavoring to outline some plan by which we might get the boat up the two and a half mile torrent to Cascade Locks.

Several years ago the Federal Government attempted to

Several years ago the Federal Government attempted to open the Columbia to commercial navigation by building locks at the Cascades, and a fourteen mile canal with locks around Celilo Rapids and Celilo Falls. Millions were spent on the project, which was supposed to have been completed just prior to American entry into the World War. But, to the present day steamboats on the Columbia above Vancouver are exactly as numerous as three-toed pterydactyls in the New York Zoo. The present locks and canals lack much of carrying shipping around the natural obstructions to navigation, and until the canals are extended to really accomplish the desired result shippers of the Columbia River Valley might as well cry for the moon as for steamboats to carry their commerce on the river. We talked with the lock keeper at Cascade Locks, who has done little of anything but to hold down his job since the locks were built. He told us that he'd be on hand to lock us through if we could ever get up to the first lock—but he didn't think there was a burglar's chance of our making it unless we were willing to wait for the Spring freshet to pass. He also assured us that there probably was no boat on the river capable of ascending the lower rapids to enter the locks. We would also encounter the hame identical condition on up the river at

Early next morning we decided to attempt the rapids—not under our own power, but in tow of the most powerful tug boat on that section of the river. Attempting to ascend the rapids under our own power would not only have been useless, but utterly foolhardy. In Bonneville we fell in with a young Finn by the name of Alfred Westlund, who was employed as a boatman by a local cannery company. His job was to collect the fish from the various fish wheels along that section of the river, and he had a boat built and powered for that special duty in foaming white water. He thought he could pull us up the rapids to the locks, and was willing to try it. Transcontinental was rigged with ropes to form almost a net around her, and then the cockpit cover was battened down after the craft had been stripped of motors and every ounce that was removable. When everything was ready we shoved out of Bonneville Creek with Transcontinental in tow, and all hands aboard the tug attired in life preservers. The way we started out looked mighty encouraging. The tug was built to climb white water like a salmon. She sailed off up the rapids almost as if she'd been navigating in still water. But, there was faster water ahead, and we soon got into it. We encountered places where the river was merely a series of aquatic terraces of foaming spray. The powerful tug began jumping and plunging until it was extremely difficult even to remain on her after deck. There were times when she climbed green columns of water precisely as I have seen salmon and trout do in going up a waterfall. Meanwhile Transcontinental was almost out of sight in the spray at times, and the tow line that held her was as taut as a fiddle string. For one hour the tug thrashed the water—gaining upstream inch by inch. She got to within half a mile of the locks. We could see the lock gates, but by that time the scenery along the bank had ceased to move, then began slipping back. Never in all my boating (Continued on page 144)



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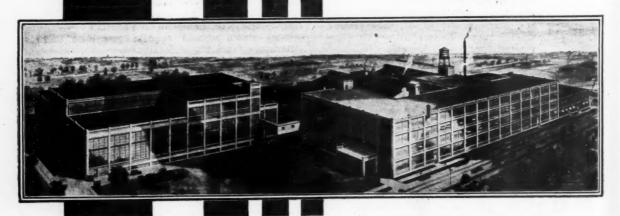
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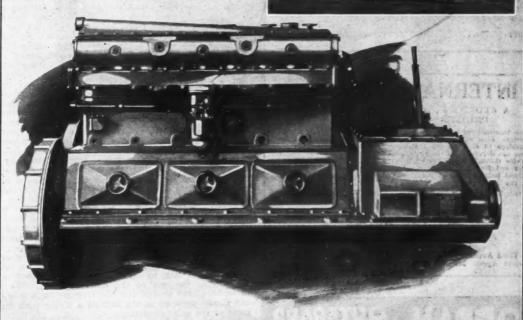
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# Across America by Motor Boat

(Continued from page 140)

experience have I seen such masterly handling of a craft as that young Finn displayed. He tried one side of the as that young Finn displayed. He tried one side of the river and then the other, but could make no progress whatever. Several times we made slight gains but only to be washed back again. Finally, the boatman shook his head—"It can't be done." He exclaimed. With that he shoved the wheel hard over, and we spun around like a pin wheel. The current struck us a resounding smack on the starboard side. Water rushed over the deck of the two We got The current struck us a resounding smack on the starboard side. Water rushed over the deck of the tug. We got headed downstream, slid down a terrifying chute of white water, and plunged into an eddy with the pilot obviously having lost steering control of the craft. In less time than it takes to tell it the tug was lifted on a huge comber and crashed broadside against the perpendicular rock cliff of the Washington shore. Rocks rained down upon our decks, and for a breathless split second the tug quivered like a winged bird. Then she got back into the stream and we bewinged bird. Then she got back into the stream and we be-gan going down the rapids like an express train making up a belated schedule. The young Finn stood at the wheel with his jaw set as if he were trying to bite a piece of sole with his jaw set as if he were trying to bite a piece of sole leather in two. He was about the color of a polar bear, and spoke not a word until we reached the foot of the rapid. When we finally swung into a landing in Bonneville Creek, he said: "Well boys, I'm sorry we couldn't make it, but I'm glad to be back here safely. I can't swim a stroke." "What would happen to you if you ever got overboard, or lost your boat?" asked Mr. Wilton. "I'd drown," laconically replied the boatman,—"Just the same as you'd do regardless of how good a swimmer you may be."

Cascade Rapids had baffled us completely, and further progress up the Columbia was impossible. The only alternative was to make a minor portage—a portage of three miles.

tive was to make a minor portage—a portage of three miles, which would bring us into the river above the rapids. Forthwith, we went to the Bonneville Garage and recruited a couple of men with a motor truck. Then, bringing the boat alongside a low mud bank in Bonneville Creek we ran a line from the boat to the truck and hauled the craft out of the water with the power of the land vehicle. An hour later we backed the truck to the water's edge above the rapids, skidded the boat off into the river, and began installing motors and stowing gear preparatory to getting under way

again.

By the time we were ready to get under way the entire forenoon was gone. Although we found fairly placid water above the rapids it still continued to exert a tremendous push down-stream which left us very little headway after we had overcome the current. Nevertheless, we made twenty-five miles up the river that afternoon, through some of the most beautiful scenery of the entire Columbia River Valley, and arrived in front of Hood River, Oregon, a little before sundown. Due to the tremendous stage of the river we had some difficulty in finding the celebrated apple town. The city is built on a piece of slightly elevated ground back of a great flood plain along the south shore of the Columbia. This flood plain was entirely submerged except for the treetops protruding out. No portion of the city is visible from the surface of the river. We fumbled around over the tree tops of the bottomland until we found an open water lagoon that of the bottomland until we found an open water lagoon that appeared to be the estuary of the Hood River. Ascending it, we found a boatload of Celilo Indian fishermen, who in broken English informed us that we were in Hood River alright, and all we had to do was to go on for a mile or so to the town. But, to save our souls we couldn't tell Hood River from the rest of the flooded region. We got lost twice, blundered around over the treetops for a mile or more, and finally drew up at the foot of a cinder path directly in front of the railroad station.

front of the railroad station.

It was our misfortune to arrive at Hood River at a time far removed from the apple harvest. For, it should be mentioned here that the Hood River Valley, of which the town of Hood River is the business center; is to apples what Fresno is to raisins, Bethlehem to steel, or Akron to rubber. Better apples never grew on trees. If Adam and Eve had lived in the Hood River Valley instead of the Garden of Eden the story of their temptation would be easier to understand. Hood River is also the home of Billy Sunday, the famous evangelist. He gave the valley a lot of valuable publicity by settling down there to grow the infamous fruit which the Book of Genesis tells us is responsible for the downfall of mankind.

downfall of mankind.

Although we got an early start out of Hood River next morning we encountered such a terrific current in the rock-walled canyon of the Columbia between there and The Dalles that our progress upstream was often a matter of inches per minute. We worked the eddies along the shores as best (Continued on page 146)

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(Continued from page 144)

we could, but this section of the river is quite tortuous. Thus, the lines of eddies were usually short, and our crossings from one side of the river to the other in search of eddies—extremely numerous. Every time we crossed the river we were swept downstream. Then, to make matters worse a strong wind began blowing up the river about nine o'clock in the morning which seemed bent upon rolling the current back to where it came from. We pulled into The Dalles at noon, drenched to the skin by flying spray, cold and hungry. Celilo Rapids, Celilo Falls, and the non-functioning Celilo Canal were just above us.

The newspaper reporters found us almost as soon as we got the boat tied up at the local ferry landing. The story of our arrival at The Dalles went on the press wires, and we learned later that our families at home heard of us through the papers before our telegrams filed at the same time were delivered. The newspaper men were greatly interested in secing us go up Celilo Rapids and Celilo Falls—but, they were doomed to disappointment. They furnished us an automobile to go out and study the river from the shores, but one look at the rapids—to say nothing of the falls, which were completely obliterated by the high water, convinced us that our chances for getting up were about the same as those of the proverbial wax cat in Hades. If we could ever reach the entrance of the Celilo Canal we could make it—but, there was the rub. With a flood of water running for nearly two miles below the canal entrance at a speed of something like twenty-five miles per hour our little packet with a speed of about 8 knots was a forlorn hope. Moreover, in a river which was running like a mill race through a canyon with perpendicular rock walls all thought of lining the boat up the shore was out of the question.

Just below the entrance of the Celilo Canal there was a

Just below the entrance of the Celilo Canal there was a salmon cannery in operation. They had a tug, used for visiting the various fish wheels, which had a speed of about 22 knots. I spoke to the cannery superintendent, and he assured us that if we could get our boat up above the second rapid he'd see that we got a tow into the canal. He assured us, however, that if the tug were sent down the rapids to get us, it would be unable to return to that section of the river until the high water passed. That, he declared, would be equivalent to close down the cannery for a period of six weeks. It would throw a hundred people out of work. Above the Celilo Canal we faced the John Day Rapids, the Umatilla Rapids, and then a string of various and sundry rapids—so numerous that on the Government charts they ran short of names, and gave the rapids numbers.

In spite of the discouraging outlook we decided to make

In spite of the discouraging outlook we decided to make one desperate effort to get into the Celilo Canal. We shoved off from The Dalles, and after a two hour battle succeeded in getting up through the first rapid. In the second rapid we encountered precisely the condition we'd anticipated—namely water that was flowing downstream at about three times our best speed in still water. We were making fair progress upstream until we passed out of the last line of eddies. Then, we began going downstream at something like sixteen miles per hour with Lewis and Clark doing all they had upstream. There was no alternative but to swing around and go with the current. In less time than it takes to tell it, we were wallowing over tremendous swells and going down stream at terrific speed. I have no means of knowing just how fast we were traveling, but I do know that we actually ran ahead of speeding motor cars that were traveling along the Columbia River Highway in the direction of The Dalles.

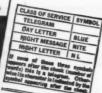
While we might have portaged around Celilo Rapids and

While we might have portaged around Celilo Rapids and Celilo Falls, such a portage would only have brought us face to face with new difficulties a few miles further up the river. If we waited six weeks for the flood to pass we might reasonably expect to get on up the remaining portion of the Columbia, into the Snake River, and to Lewiston, Idaho, which we had contemplated as the point from which we were to begin our portage over the continental divide. But, there are only a certain number of weeks in a temperate zone summer. We still had more than 5000 miles of aquatic traveling to do east of the continental divide. If we waited for the flood to pass, we could expect to run into some disasterous fall weather in the Great Lakes, and even frozen waters before we could hope to reach New York. The entire success of our attempt to cross the continent by water-therefore seemed to hinge upon the advisability of lengthening our portage over the continental divide. If we kept on battling up the Columbia we'd spend the major portion of the summer making a pitiful mileage. That would cause us to miss high water in the upper Missouri River—a thing (Continued on page 150)



The Crew

aptain John Hoag, writer, rank Wilton, news reel hotographer and famed as merman with the Oakmed Museum's African exdition; Val Woodbury, usiness man and former naval officer.



Received at Plankinton Hotel, Milwaukee, Wis.

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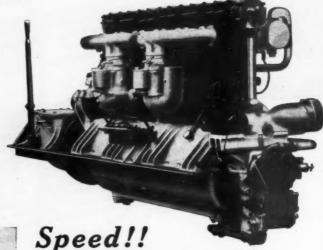
1926 FIAT — Model F-6 300 H. P. at 1650 R. P. M.

Price \$3250.00

f. o. b. Detroit

Effective December 1st, 1925

SPECIFICATIONS:—6 cylinders; 6.3" bore, 7.09" stroke. Overall length, 94"; width, 30"; height, 42½". Weight 1750 lbs.



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# Across America by Motor Boat

(Continued from page 146)

as disasterous as getting wrecked in the Columbia would have

The only logical thing to do seemed to lengthen the portage. This we did by dropping back to The Dalles from Celilo in order to get a shipping point on a railroad division. The arrangements for the portage were quickly made at The Dalles. Officials of the Oregon-Washington Railroad were arrangements for the portage were quickly made at The Dalles. Officials of the Oregon-Washington Railroad were more than willing to cooperate with us. They got us a special box car for the boat and equipment and agreed to spot it straight through to Fort Benton, Montana, as a manifest shipment. We then trucked the motors and all equipment to Ernie Thompson's Garage where it was boxed for shipment. The boat was dragged out of the water, trucked to the freight house, and stowed in the box car on specially built cradles turned out by the kindly garage man. That evening we crossed the Columbia on the ferry to Grand Dalles, Washington, and boarded the train for Fort Benton. All the nightmares, scenic beauty, and battling up the Columbia were memories of the past. Our next boating would be a downhilf slide of 2280 miles in the Missouri.

June 13th found us in the little town of Fort Benton, Montana, with Transcontinental tied up on the shore of the swift Missouri. It is doubtful if anything since the last buffalo stampede had stirred up more interest and excitement. (To be continued)

(To be continued)

# Auxiliary Ignition for Marine Motors

(Continued from page 40)

been adjusted so that the spark from the auxiliary system will occur at the same time as the magneto spark, wire with high tension cable from No. 1 terminal to No. 1 spark plug and continue in succession according to the firing order of the engine. The center connection on the cover leads to which connects through a switch to the battery. other side of the battery is grounded. In wiring vibrator coils, run from No. 1 contact on the timer to No. 1 coil and from the secondary terminal of that coil to the spark plug in No.

the secondary terminal of that coil to the spark plug in No. I cylinder, and follow out in succession according to the firing order of the engine. The battery wire leads from a common terminal on the coil unit or from the primary terminal of each coil to the battery. The other side of the battery is grounded. We now have two separate ignition systems connected to one set of spark plugs which is all wrong. With the single spark system as an auxiliary the magneto will function if the distributor head is removed from the auxiliary distributor, which eliminates all possibility of the high tension current finding an easier path to the ground than across the spark plug gap. The auxiliary system will not fire the engine if the magneto wires are not disconnected from the plugs, to plug gap. The auxiliary system will not fire the engine if the magneto wires are not disconnected from the plugs, to make the magneto system inoperative the magneto is grounded which leaves a direct path to the ground through the high tension wires. If you use single spark plugs it is imperative that the high tension wires of the system not in use be disconnected at the plugs to insure the proper functioning of other system. There is a twin plug on the market that is made for just this service. It has two separate electrodes, one on each side, each snarking independent of the that is made for just this service. It has two separate electrodes, one on each side, each sparking independent of the other, and will give excellent service.

When a motor is equipped with double ignition, both systems should be used enough to keep the spark plug electrodes clean and free from carbon and the mechanism in good working order. If the auxiliary system is not used at all until needed, you will be depending on something that is very apt to be out of working order when most needed. W. B. M., Newburgh, N. Y.

# Lead Pipe for Scuppers

(Continued from page 44)

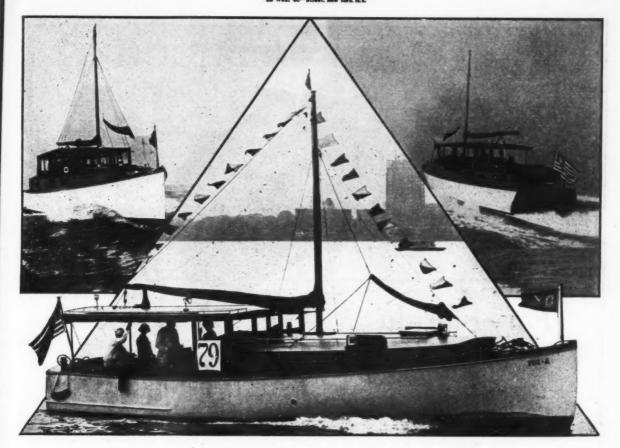
The holes in the deck and bottom should be made the proper size and should be countersunk to receive the flanges. It may be well to reinforce the planking at the scupper hole by means of a block like a butt block.

The pipe is slipped in place and the flange set in white lead and securely tacked with copper tacks or brass nails. The other end of the pipe is cut off at the proper length and the flange made in place.

The other end of the pipe is cut on the flange made in place.

Brass screw pipe and fittings would make a fair scupper except for the difficulty of installation due to the curves of the boat and stoppage trouble caused by the ends of the pipes and nipples screwed into the fittings. A ground brass check valve in the pipe would not be satisfactory as dirt lodging under the check would render it useless.

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Sportabout 8-220 Special

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This book has been published in response to repeated requests for us to bring out in complete book form MoToR BoatinG's Correspondence Course, the wonderful illustrated course in Piloting, Seamanship, and Small Boat Handling which has been appearing regularly in the issues of MoToR BoatinG since February, 1921. It is profusely illustrated with nearly three hundred cuts and diagrams. MoToR BoatinG's Correspondence Course proved to be the most successful and most popular feature ever undertaken by a boating magazine. Thousands of readers became better boatmen by studying this course. Now you will want it in permanent book form to keep abroad your boat for reference and guidance. This course was prepared with an entirely new idea in text book or correspondence instruction. Instead of page after page of dry text matter with only occasional illustrations, it is composed mainly of pictures, drawings, photographs, charts and diagrams, covering every situatrations, it is composed mainly of pictures, drawings, photographs, charts and diagrams, covering every situation and every point with the purpose of each picture clearly explained by a concise and simple title. You will find this book more enjoyable and easier to understand than any text book you ever read. You will find it correct and authoritative because it has been prepared by experts with years of boating experience and every necessary reference at hand. You will find it easy to read and easy to remember because each chapter is reviewed by pertinent questions which reveal your understanding of the lessons. The preparation of this Course has cost thousands of dollars. These books would easily cost \$10.00 each if the work was undertaken for book purposes

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This book of charts contains the most suitable courses between principal ports and harbors as well as magnetic directions, distances in statute miles, all principal lights, buoys, etc. These charts are all drawn to a scale and have proven invaluable to motor boatmen while cruising or planning a cruise. Much other valuable cruising data is given in the book. This includes information as to fuel and supplies, the outlines of several complete cruises, a schedule for a twenty-day trip to Florida, and the addresses of all government chart

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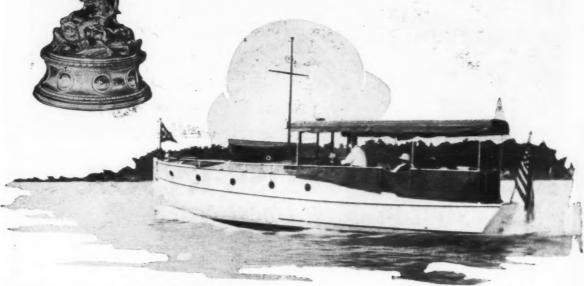
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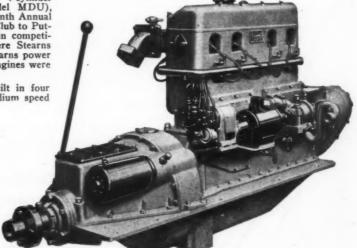
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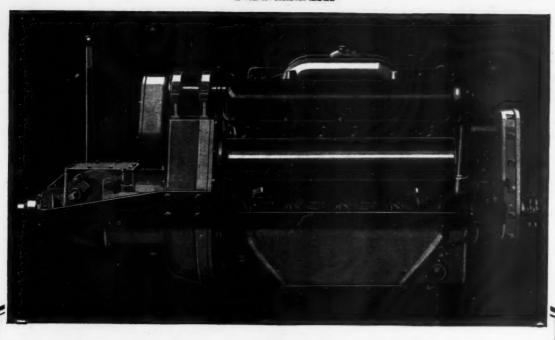
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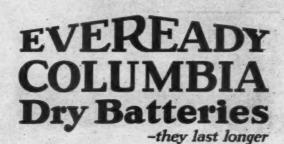
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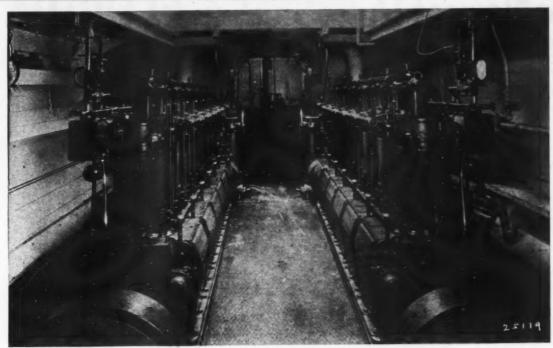
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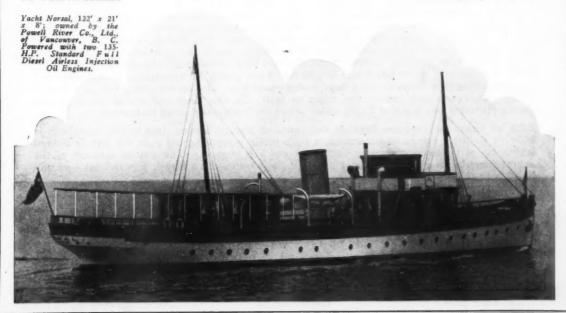
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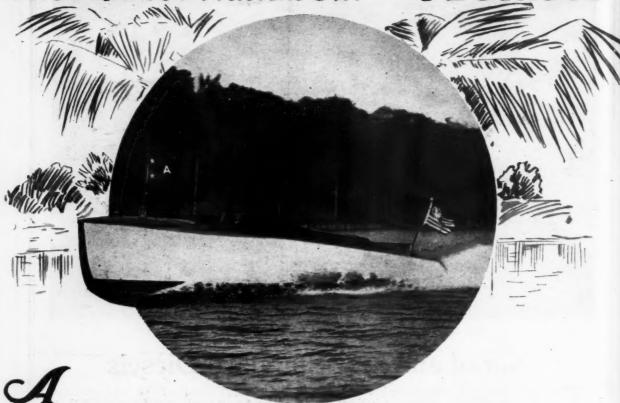
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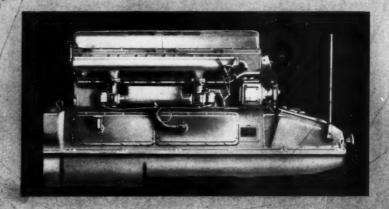
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